



**ELEVENTH YEAR REPORT ON THE LEACHATE COLLECTION
AND LANDFILL GAS EXTRACTION SYSTEMS**

**BLACKWELL FOREST PRESERVE LANDFILL SITE
DUPAGE COUNTY, ILLINOIS**

MWH File No.: 4050581

Prepared For:

**Forest Preserve District of
DuPage County, Illinois**

Prepared By:

**MWH Americas, Inc.
175 West Jackson Boulevard, Suite 1900
Chicago, Illinois 60604**

July 2009

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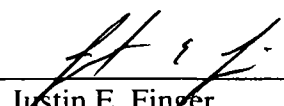
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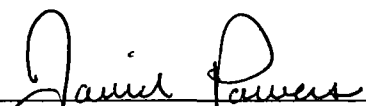
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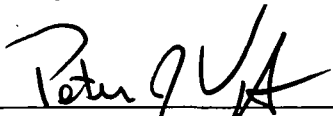
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ACRONYMS AND ABBREVIATIONS

amsl	Above Mean Sea Level
AOC	Administrative Order by Consent
ASTM	American Society for Testing and Materials
BOD	Biological Oxygen Demand
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
District	Forest Preserve District of DuPage County
DV	Deep Vent
EW	Extraction Well
FSP	Field Sampling Plan
HQ	Hazard Quotient
HRS	Hazard Ranking System
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
lb/hr	Pounds per hour
LCS	Leachate Collection System
LFG	Landfill Gas
LS	Lift Station
MCL	Maximum Contaminant Levels
MWH	MWH Americas, Inc.
NOAA	National Oceanic and Atmospheric Association
NPL	National Priorities List
O&M	Operations and Maintenance
ppm	Parts per million
PVC	Polyvinyl Chloride
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SV	Shallow Vent
SVOC	Semi-Volatile Organic Compound
TDS	Total Dissolved Solids
TNMOC	Total Non-Methane Organic Compounds
TSS	Total Suspended Solids
U.S. EPA	United States Environmental Protection Agency
UAO	Unilateral Administrative Order
VOC	Volatile Organic Compound
WWTP	Wastewater Treatment Plant

1.0 INTRODUCTION

This Eleventh Year Report has been prepared by MWH Americas, Inc. (MWH) on behalf of the Forest Preserve District of DuPage County, Illinois (District). It presents a summary of the operations and maintenance (O&M) activities undertaken from May 2008 through April 2009 on various response actions previously constructed at the Blackwell Landfill. The response actions were constructed in 1997 and 1998, and were required by Administrative Order by Consent (AOC), Docket No. V-W-'96-C-341, between the United States Environmental Protection Agency (U.S. EPA) and the District. The response actions included repair of the existing landfill cover, installation of a leachate collection system (LCS) and installation of a landfill gas (LFG) venting system. A summary of O&M activities from initial construction of the response action in 1997 and 1998 through April 2009 is provided in the following reports:

- *First Year Report on the Leachate Collection System and Landfill Gas Extraction System* (Montgomery Watson, 1999c);
- *Second Year Report on the Leachate Collection System and Landfill Gas Extraction System* (Montgomery Watson, 2000b);
- *Third Year Report on the Leachate Collection System and Landfill Gas Extraction System* (Montgomery Watson Harza, 2001e);
- *Fourth Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2002d);
- *Fifth Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2003c);
- *Sixth Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2004e);
- *Seventh Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2005d);
- *Eighth Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2006c);
- *Ninth Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2007c); and
- *Tenth Year Report on the Leachate Collection System and Landfill Gas Extraction System* (MWH, 2008c).

This Eleventh Year Report meets the reporting requirements outlined in the February 1999 Final O&M Plan (Montgomery Watson, 1999a), modifications provided in the First and Second Year Reports on the Leachate Collection System and Landfill Gas Extractions

Systems (Montgomery Watson, 1999c and 2000b), and the April 9, 1999 Unilateral Administrative Order (UAO), Docket No. V-W-'99-C-541. The UAO requires an evaluation of the effectiveness of the current leachate and LFG extraction systems in managing leachate and landfill gas throughout the Site.

1.1 BACKGROUND

The Blackwell Landfill is located within the Blackwell Forest Preserve approximately six miles southwest of downtown Wheaton, Illinois in Section 26, Township 39 North, Range 9 East, DuPage County, Illinois (Figure 1). The Blackwell Forest Preserve encompasses 1,200 acres of woodlands, grasslands, wetlands and lakes, with the landfill covering approximately 40 acres in the central part of the preserve (Figure 2).

1.1.1 Landfill Construction

The Blackwell Landfill was constructed adjacent to an abandoned gravel pit that was purchased by the District in 1960 with the intent to create a large hill that could be used by the public for recreational purposes. The District began construction of the landfill in 1965 and accepted the final load of refuse in 1973. The District used soil material from the abandoned gravel pit, and so constructed a lake (Silver Lake) while building the hill.

Plans for the landfill, as well as photographs taken during the landfill construction, provide an understanding of the landfill construction. The landfill was laid out over an approximate 35-acre area. It was constructed on top of the existing ground surface, rather than being excavated into the ground. The first step was to put down a 2-foot layer of clay to act as the base liner. A series of 8 to 9 foot high berms were laid out to define eight major disposal areas, each three to five acres in size. These initial cells were then filled with a multitude of small refuse cells. Five to ten scavenger trucks would come in each working day and deposit refuse. In general, the refuse would be covered with available soil from the Silver Lake area.

The daily cover was obtained from the area to the east of the landfill that is now Silver Lake. As the District excavated the lake, it would sell the sand and gravel for off-site construction to help defray the costs of landfill construction. Therefore, daily cover generally consisted of the low permeability, fine-grained material that lacked the commercial value of the sand and gravel. When completed, each major cell had been filled with approximately one-half refuse and one-half daily cover.

When each of the cells had been filled, it was capped off with a two-foot clay layer that formed the base liner for the next cell. After the first level of cells was completed, new berms were placed to construct another series of cells. To enhance the ultimate stability of the hill, the new berms were offset from the berms below. Although a photographic history of construction was kept, as-built drawings were not maintained, so there is no specific map available for the locations of the berms or the cells. However, District officials have described the result as a "honey-comb" structure of small refuse cells surrounded by soil, and the photographic record supports this description.

By the time final contouring and landscaping was completed in 1975, forty to sixty feet of clay had been placed on top of refuse on the southwest side of the landfill to create Mount Hoy. Mount Hoy was finished at the final target elevation of approximately 840 feet above mean sea level (amsl), approximately 140 feet above the surrounding natural topography. Other areas of the landfill were covered with 2 to 15 feet of predominantly clay cover. In some areas, a vegetative cover of varying sand, gravel and clay composition was placed. A final layer of clayey topsoil (minimum of 4 to 6 inches thick) was installed and vegetated. The 2004 topography of the Site is shown in Figure 3.

The Blackwell Landfill contains approximately 1.5 million cubic yards of refuse classified as general household refuse and light industrial waste, and includes an equal volume of natural fill.

1.1.2 Regulatory History

In March 1986, the U.S. EPA evaluated the Site using the Hazard Ranking System (HRS). A composite score of 35.57 (above the 28.5 threshold for National Priorities List [NPL]) was assigned, with the following scores assigned to each potential route: Surface Water 0.0; Air 0.0; and Groundwater 61.54. The Site was proposed for inclusion on the NPL in the Federal Register, Volume 53, Number 122, dated June 24, 1988. The Site received final listing on the NPL in the Federal Register, Volume 55, Number 35, dated February 21, 1990.

Subsequent to the final listing on the NPL, a Remedial Investigation/Feasibility Study (RI/FS) was performed at the landfill. The Final RI Report (Warzyn, 1994) was submitted to the U.S. EPA in 1994, while the Draft FS Report (Montgomery Watson, 1995) was submitted in 1995.

On March 7, 1996, the U.S. EPA and District agreed to an AOC (Docket No. V-W-'96-C-341), which specified response actions that the District would conduct at the Site. These response actions have been completed, or are part of ongoing O&M. They included:

- Delineation of the limits of waste at the landfill edges;
- Cap characterization to delineate areas which did not have two feet of low permeability soil over refuse;
- Repair of those portions of the landfill cover that had less than two feet of low permeability soil over refuse;
- Regrading to promote surface water drainage off the landfill;
- Installation of a leachate collection system;
- Installation of a passive landfill gas venting system;

- Treatment of landfill leachate¹;
- Collecting, analyzing, and evaluating groundwater samples annually; and
- Monitoring performance of the LCS and LFG venting system.

On September 30, 1998, the U.S. EPA issued the Record of Decision (ROD) for the Blackwell Landfill. The ROD requires long term O&M of the previously completed response actions, long-term monitoring, monitored natural attenuation of groundwater, and possible augmentation of the LCS and LFG venting system. On April 9, 1999, the U.S. EPA issued a UAO, Docket No. V-W-'99-C-541, to the District. This UAO directed the District to perform the selected remedial action described in the ROD and set forth the requirements for implementation of the remedial action.

1.2 REPORT PRESENTATION

The report is presented in the following eight sections:

- This Section 1.0 presents the purpose of the Eleventh Year Report and describes the current conditions at the Blackwell Landfill;
- Section 2.0 describes general O&M activities conducted on the landfill;
- Section 3.0 describes O&M activities conducted on the landfill cover;
- Section 4.0 describes the operation of the LCS and summarizes O&M data;
- Section 5.0 describes the operation of the LFG venting system and summarizes O&M data;
- Section 6.0 briefly describes the Long-Term Groundwater Monitoring Program;
- Section 7.0 evaluates the leachate and LFG data, and provides evaluations for future O&M inspections and monitoring; and
- Section 8.0 provides the references utilized in this Eleventh Year Report.

¹ Leachate is collected in a holding tank until it is transported to the Wheaton Sanitary District Waste Water Treatment Plant by truck for treatment and disposal.

2.0 GENERAL O&M

2.1 DESCRIPTION

General O&M at the Blackwell Landfill from May 2008 through April 2009 was similar to the O&M conducted during previous years. Activities included inspection and maintenance of security measures around the LCS and LFG components (i.e., fencing, warning signs, vaults and vault covers), upkeep of access roads related to the LCS and LFG system, and control of vegetation around LCS and LFG components.

2.2 INSPECTION AND MAINTENANCE RECORDS

General inspection and maintenance requirements are outlined in the February 1999 Final O&M Plan, and included the following:

- Verifying that Site security measures such as fencing, vaults and gates continue to restrict unauthorized access to system components, and repairing these security measures, as necessary;
- Maintaining Site access roads, as necessary;
- Maintaining vegetation and trimming excess vegetation that hide, inhibited access or potentially could damage system components; and
- Repairing erosion of areas adjacent to the landfill, as necessary.

The inspection, maintenance, monitoring and leachate disposal activities were documented on forms on an as-needed basis. Copies of the forms are provided in Appendices A-1 through A-5.

O&M of the landfill was routine during the 11th year with no significant problems to note. Site security measures remained intact with no vandalism or security breaches noted. Some ruts were observed on the access road to the top of Mt. Hoy in September 2008 and March 2009 following heavy rainfall events. The access roads were re-graded and repaired shortly after the ruts were observed. Vegetation is in good condition and no erosion was noted in areas adjacent to the landfill. An annual burn was conducted on the Blackwell landfill in April 2009 as part of the task of establishing natural prairie cover on the landfill.

3.0 LANDFILL COVER O&M

3.1 DESCRIPTION

Routine O&M of the landfill cover system includes inspection of the landfill surface, vegetative conditions and surface water drainage features. In addition, O&M of the landfill cover includes conducting a controlled prairie burn on an annual basis.

3.2 INSPECTION AND MAINTENANCE RECORDS

The landfill cover inspection and maintenance requirements are outlined in the February 1999 Final O&M Plan, with modifications provided in the First Year Report. Inspections were undertaken to identify necessary repairs in the landfill cover system, including:

- Ponding of surface water as a result of landfill settlement and vehicular rutting;
- Stressed or dead vegetation as a result of LFG migration through the cover soils;
- Erosion of the landfill cover or surface water drainage features;
- Siltation of drainage ways;
- Excessive vegetation growth near LCS components and LFG vents;
- Bubbling of LFG through the landfill topsoil during the spring or summer following a one inch or greater rainfall event; and
- Tension cracks on the surface of the landfill cover caused by landfill settlement.

Inspections of the landfill cover were conducted during the bimonthly monitoring of leachate levels in LFG vents and extraction wells. The inspection activities are documented on forms provided in Appendix A-1 through A-3 and A-5.

The Final O&M Plan also required cover inspections following any 10-year, 24-hour rainfall event, defined as a rainfall event with a probable recurrence interval of once in ten years as described by the National Weather Service in Technical Paper No. 40. Rainfall Frequency Atlas of the United States, May 1961. For the DuPage County area, a rainfall of 4.5 inches within a 24-hour period meets this definition. On September 13, 2008, rainfall totals at the DuPage County Airport rain gauge reported to be 6.08 inches of precipitation. MWH conducted an inspection of the landfill and the components of the leachate collection and landfill gas extraction systems on September 15, 2008.

During the inspection, no erosion or areas of dead or stressed vegetation associated with migration of landfill gas were observed on the landfill. Some minor ruts were observed on the access road going to the top of Mt. Hoy, but no large areas of standing water were observed on

the landfill. Flooding was noted in extraction well vaults EW-07 and EW-01A.

The leachate extraction system temporarily shut down during the September 13th storm. The compressor shut down due to water in the air lines. It is believed that water entered the compressed air lines through an exhaust port due to the flooded extraction well vaults. On September 16, 2008 the air lines were drained, compressor re-started, and the system returned to normal operation.

The inspections of the landfill cover were routine, with no significant problems. Some surface water ponding was observed on the north side of the landfill east of the toboggan run and on the south side of the landfill east of Lift Station 1 (LS01). No areas of stressed or dead vegetation were noted. Excessive vegetation growth near vents and wells was cut back in areas where necessary. Minor erosional ruts were observed during site inspections made throughout the Eleventh Year; however, these ruts were shallow and the clay cap was not exposed.

3.3 SITE REGRADING ACTIVITIES

No site regrading activities were conducted during the period covered by this report (i.e., May 2008 through April 2009). However, additional gravel was added to repair ruts in the access road to the top of Mt. Hoy in the fall of 2008 and spring of 2009.

3.4 PRAIRIE RESTORATION ACTIVITIES

In 2001, as part of the *Phase I Restoration Plan for the Revegetation of the Blackwell Forest Preserve Landfill* (Montgomery Watson and Conservation Design Forum, 2000), the District began the conversion of vegetation on the Blackwell Landfill from Eurasian grasses to native Illinois grasses. An herbicide was applied to kill or stunt the growth of existing vegetation, a prairie seed mixture was drilled into the landfill cover, and the vegetation was mowed in the fall of 2001. The prairie restoration activities are summarized in the *First Year Restoration Monitoring Report* (Conservation Design Forum , 2002a).

In order to continue the development of the Blackwell Landfill prairie, restoration activities are conducted on an annual basis. Targeted weed control using an herbicide is conducted between late spring and early fall. Woody sapling removal and re-seeding of any disturbed areas are also conducted on an as needed basis. In early fall, native prairie grass seed is collected and dispersed across the Site and fire breaks are mowed around the LCS and LFG components in preparation for the annual prairie burn conducted in the spring. A Root Penetration Assessment is conducted every five years to determine if root masses have compromised the clay cap. The next root penetration evaluation is scheduled to be conducted in 2010. Summaries of prairie restoration activities conducted over the past eight years can be found in the corresponding standalone reports:

- *First-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2002* (Conservation Design Forum, 2002a);

- *Second-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2002* (Conservation Design Forum, 2002b);
- *Third-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2003* (Conservation Design Forum, 2003);
- *Fourth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2004* (Conservation Design Forum, 2004);
- *Fifth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2005* (Conservation Design Forum, 2005);
- *Sixth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2006* (Conservation Design Forum, 2006b);
- *Seventh-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2008* (Conservation Design Forum, 2007); and
- *Eighth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2009* (Conservation Design Forum, 2009).

Beginning in Spring 2004, controlled burns were executed at the Blackwell Landfill. The Spring 2004 prairie burn was conducted on April 20, 2004. The 2005 prairie burn was conducted on April 14, 2005. The 2006 prairie burn was scheduled for April 19, 2006, but was cancelled due to excessive rainfall earlier in the week. The 2007 prairie burn was conducted on April 9, 2007, and the 2008 prairie burn was conducted on April 15, 2008.

The 2009 Blackwell Landfill prairie burn was conducted on April 23, 2009. Similar to previous prairie burns, procedures followed the U.S. EPA-approved Burn Plan (MWH, 2005b). In accordance with this plan, the LCS and LFG venting systems were shut down and local governmental agencies were notified of the pending burn. After the burn was completed, MWH personnel inspected the landfill's LFG and LCS components for damage in accordance with the U.S. EPA-approved Field Sampling Plan (FSP) Addendum. No damage was noted to any of the landfill's remedial components. Therefore, modifications to the current Burn Plan are not recommended at this time. A complete summary of the 2009 Blackwell prairie burn activities is presented in the *Phase I Prairie Restoration Controlled Burn Activities Summary Report* (MWH, 2009b).

3.5 WATER SEEP

On May 14, 2001, MWH notified the U.S. EPA (verbally) that a water seep was discovered on the north side of the Blackwell Landfill. MWH subsequently collected and analyzed water samples from this area to determine if the water posed a risk to human health or the environment. Analytical results indicated that the seep did not contain landfill leachate.

In an effort to eliminate the seep, the District volunteered to construct a water collection trench to collect the seep water, and route it to the existing LCS system, which transports it to the holding tank. Design details were provided in the December 28, 2001 letter to the U.S. EPA (Montgomery Watson Harza, 2001f). The U.S. EPA approved construction of the water collection trench on February 19, 2002. The trench was installed in June 2002 and was integrated into the existing LCS.

However, the shallow trench did not eliminate the seep. During the past four years of operation, the District and MWH observed a water seep on the north side of the landfill east of the toboggan run. The seep on the north side of the landfill is smaller and less active than before the surface water collection trench was installed. The District believes that remnants of past haul routes and/or staging areas constructed in this area may be responsible for the water seep. These former haul routes and/or staging areas would have been constructed of gravel and because gravel is coarse grained it may be acting as a preferential pathway for water to travel to the toe of the landfill. The District will propose installing a second, deeper surface water collection trench in order to eliminate this water seep.

4.0 LEACHATE COLLECTION SYSTEM O&M

4.1 DESCRIPTION

The LCS was put into operation in December 1997. The system includes nine leachate extraction wells (EW) and two lift stations (LS), which pump leachate into a common underground conveyance pipe system. The conveyance system transports leachate to a holding tank which is regularly pumped out and transported offsite by tanker trailers for treatment and disposal.

The components of the LCS are summarized below. Full details are provided in the February 1999 Final O&M Plan.

4.1.1 Extraction Wells

The LCS incorporates nine extraction wells (EW-1, EW-1A, and EW-2 through EW-8) located in the areas that previously had the highest indicated leachate head levels. The well pipes are installed within 3-foot diameter boreholes, and are constructed of 6-inch diameter Schedule 120 polyvinyl chloride (PVC) pipe. The lower two-thirds of each well pipe is perforated and each borehole was backfilled with coarse aggregate. The wells are used to extract leachate and to allow LFG to flow through the passive gas venting system. A wellhead assembly connects the LFG and leachate discharges from each well to its respective conveyance piping system. The extraction well locations are shown on Figure 4. A description of the LFG venting system is described in Section 5.0 of this report.

Leachate levels within each extraction well are measured with a water level meter during bimonthly O&M monitoring.

4.1.2 Lift Stations

Lift station LS01 collects stormwater from the south stormwater trench at existing manhole MH-20 and condensate that had formed in the gas conveyance pipe from dripleg DL01. The pump in lift station LS02 did not run during Year Eleven because LS02 is dry. The shallow collection trench, installed downslope and north of EW-3, supplies surface water infiltration to lift station LS03. LS03 continued to pump the collected surface water to the leachate holding tank throughout Year Eleven.

4.1.3 Leachate Well Pumps

The nine extraction wells and three lift stations are fitted with pneumatic leachate extraction pumps that are capable of pumping a maximum 4 gallons per minute. Clean Environment[®] manufactures all of the twelve pneumatic pumps. A description of the Clean Environment[®] pumps is provided in the Second Year Report (Montgomery Watson, 2000b). Previously, the pump installed in lift station LS03 had been manufactured by the Blackhawk Environmental Company[®]. However, in April 2009, this pump malfunctioned and was replaced by a Clean Environment[®] pneumatic pump.

The volume of leachate pumped from each well is recorded remotely with a pump-stroke (i.e. cycle) counter within each wellhead/lift station and in the compressor station control building. Pump operation can be confirmed by observing the cycle counters.

4.1.4 Leachate Holding Tank

A 10,000-gallon double-wall steel-reinforced STI-P3[®] holding tank is installed below grade near the compressor/control building north of the landfill to temporarily store extracted leachate and condensate (the tank provides monitoring of the interstice [space between the double walls] as a leak detection system). When the tank is full, the collected leachate is loaded into tanker trucks and hauled to the Wheaton Sanitary District Wastewater Treatment Plant (WWTP) in Wheaton, Illinois for treatment and disposal under permit. For the past 11 years, the leachate holding tank has generally been emptied one or two times per week.

4.1.5 Compressor/Control Building

The compressor/control building located north of the landfill contains the air compressor system and system controls. The compressor system includes a desiccant air dryer to maintain dry supply air to the leachate extraction pumps and to minimize freezing situations. The system controls include manual and automatic LCS system controls, holding tank liquid level alarms, leak detection indicators, and compressor and dryer status indicators.

4.1.6 Operation of the LCS

The LCS began operation in early December 1997. Following initial startup of the LCS, the system has been operated continuously with automatic shut down when the holding tank becomes full. Tanker trailers are scheduled in advance to collect and transport the leachate for disposal at the Wheaton WWTP for treatment. After the tank is emptied, the LCS is restarted.

4.2 INSPECTION AND MAINTENANCE RECORDS

The LCS inspection and maintenance requirements are outlined in the February 1999 Final O&M Plan with modifications provided in the First Year Report. The inspection and maintenance requirements include the following:

- Routinely verifying integrity and operation of system components;
- Recording system performance data, including pump-stroke counters;
- Scheduling leachate testing, load-out, and treatment;
- Responding to alarm conditions; and
- Performing maintenance and scheduling system repairs, or modifications.

The inspection, monitoring, and maintenance activities are documented on forms on an as-needed basis. Copies of the forms are provided in Appendices A-1 through A-5.

During the Eleventh Year of operation, the components of the LCS were inspected on a bimonthly, quarterly, semi-annual, annual, and as-needed basis in accordance with the schedule provided in Table 7. The control station and leachate holding tank were routinely inspected and monitored by the O&M operators, while components of the leachate extraction wells and lift stations were inspected on a bimonthly basis. Components of the control station, leachate holding tank, leachate extraction wells and lift stations found to be functioning improperly were immediately fixed by the O&M operators. The work conducted on these components was logged using the appropriate O&M maintenance forms (Appendix A-3).

In addition, the following O&M activities were conducted:

- Leachate head levels were measured in the leachate extraction wells and LFG vents on a bimonthly basis;
- Filters and lubricants within the compressor and dryer systems were replaced on a quarterly, annual, or as-required basis; and
- Leachate samples were submitted for required analytical testing on a quarterly basis. The results of these analyses for this reporting period are attached in Appendix B.

Maintenance of the LCS was generally routine. It consisted of maintaining pump operation and changing oil and filters and lubricating the air compressor and air dryer on a periodic basis. The non-routine maintenance of note, and maintenance that was not originally anticipated, included the following:

- Performed maintenance on pump float in EW-3 on May 21, 2008.
- Performed maintenance on pump float in EW-5 on June 25, 2008.
- Drained water in air lines on September 16, 2008. Water entered air lines as a result of flooded extraction well vaults due to heavy rainfall on September 13 and 14, 2008.
- Installed new float for leachate holding tank on September 25, 2008.
- Installed new belts on air compressor on October 21, 2008.
- Replaced malfunctioning Blackhawk Environmental Company® pump in LS03 with rebuilt Clean Environment® pump.

On April 28, 2008, the leachate collection system went down as a result of low air pressure. The cause of the air leak was discovered in Lift Station 01 (LS01). The shut-off valve inside LS01 was leaking allowing the decrease in air pressure. Hard Hat Services, Inc. repaired the shut-off valve on May 6, 2009. In addition, Hard Hat Services excavated down to the 2-inch air line and installed isolation valves within the airline at four locations across the landfill. If the air lines become damaged in the future, the isolation valves can be used to locate the run of pipe that is damaged.

On January 22, 2009, a hole was observed in the air dryer screen in the compressor. A-1 Air Compressor of Addison, Illinois replaced the air dryer screen the same day.

4.3 LANDFILL AREAS

The Blackwell Landfill has been sub-divided into 15 Landfill Areas² for the purpose of presentation of data (Figure 5). The leachate elevation and extraction data for each of the 15 Landfill Areas are shown on Drawings 1 through 15.

4.4 LEACHATE LEVELS

The leachate levels within the extraction wells and LFG vents were measured on a bimonthly basis by inserting a water level meter into each well or LFG vent. The LCS pumps were shut down for a minimum of 48 hours prior to measuring the leachate levels so that the recorded data would represent equilibrium conditions and not pumping effects. A trendline has been maintained for each leachate extraction well and LFG vent to determine whether leachate levels have been increasing or decreasing (refer to Drawings 1 through 15).

The measured leachate levels in the twenty-five LFG vents and nine extraction wells are summarized in Drawings 1 to 15 and in Table 1. In general, leachate levels have remained stable from Year Ten to Year Eleven (May 2008 through April 2009). Average leachate levels increased in four of the seven extraction wells where leachate levels are measured (EW-1, EW-1A, EW-2, and EW-6) from Year Ten to Year Eleven. Conversely, the remaining three extraction wells where leachate levels are measured (EW-3, EW-5, and EW-7) showed a decrease in average leachate levels. Table 1A shows the average yearly leachate elevations at extraction wells and LFG vents since startup. Specific trends are discussed in Section 7.0 of this report.

4.5 LEACHATE VOLUME

The LCS conveys extracted leachate to the leachate holding tank which is regularly emptied into tanker trucks and transported to the Wheaton WWTP for treatment and disposal. The District's original leachate disposal permit with the Wheaton WWTP (Permit No. 1995 EE-4467) expired August 1, 2000. Permits are valid for five years and have been renewed each time they have expired. The current permit dated May 2, 2005 will expire on March 30, 2010. A copy of the permit is included in Appendix B.

² Fifteen Zones-of-Influence around extraction wells were established in the First Year Report on the Leachate Collection System and Landfill Gas Extraction System. The zones were established for the purpose of identifying areas on the landfill that share similar leachate characteristics, such as:

- Areas whose leachate levels appear to be directly influenced by LCS operations.
- Areas whose leachate levels do not appear to be directly influenced by current LCS operations, although the leachate levels may be influenced by other factors; and
- One area whose liquid elevations correspond to groundwater elevations in nearby groundwater monitoring wells.

With eleven years of monitoring data now available, it appears that the leachate elevations in most extraction wells and vents are acting independently. Therefore, the term "Zones of Influence" is no longer considered appropriate, and the term "Landfill Areas" has been substituted.

4.5.1 Leachate Disposal

The volume of leachate disposed of at the Wheaton WWTP is documented on Leachate Disposal Logs included in Appendix A-4. The cumulative cycles on the pneumatic extraction pumps within each extraction well and lift station (recorded on the pump-stroke counter within the control building) are documented on Site Visit Operating Logs each day that leachate was disposed of at the Wheaton WWTP. Copies of the Site Visit Operating Logs are provided in Appendix A-1. The volume of leachate removed from the extraction wells and lift stations is calculated based upon the disposal history and number of recorded pump cycles. A daily summary of the disposed leachate volumes during Year Eleven is provided in Table 2. The cumulative volume of leachate removed from the landfill is presented in Drawing 16. Table 2 and Drawing 16 indicate that approximately 6,037,000 gallons of leachate has been removed from the landfill and disposed of since 1997.

The volume of leachate transported to the Wheaton WWTP and the number of leachate shipments during the previous eleven years are summarized below. This table indicates that an increased volume of leachate was disposed of in Year Eleven as compared to Year Ten.

Year	Volume Shipped (gallons)	Percent Change from Annual Average	Number of Leachate Shipments to WWTP
1 (12/97 to 4/99)	912,120	66%	108
2 (5/99 to 4/00)	460,050	-16%	58
3 (5/00 to 4/01)	640,958	17%	82
4 (5/01 to 4/02)	513,900	-6%	65
5 (5/02 to 4/03)	292,000	-47%	45
6 (5/03 to 4/04)	373,300	-32%	58
7 (5/04 to 4/05)	502,700	-8%	63
8 (5/05 to 4/06)	427,400	-22%	56
9 (5/06 to 4/07)	705,800	29%	85
10 (5/07 to 4/08)	482,775	-12%	60
11 (5/08 to 4/09)	725,550	32%	81
Annual Average	548,778	NA	69

4.5.2 Extraction Wells

The annual volumes of leachate removed from the nine extraction wells are summarized in Table 3. The cumulative volume of removed leachate, sorted by volume, is summarized in Table 4. The nine extraction wells have removed approximately 4,481,000 gallons of leachate and the lift stations have removed approximately 1,555,000 gallons of leachate since the LCS was put into operation. Table 4 indicates that 29.5 percent of the total leachate volume removed was removed by just one of the nine extraction wells (i.e., EW-8), extracting 1,778,898 gallons by the end of April 2009. In comparison, the least productive extraction well (EW-4) produced 86,245 gallons and accounted for less than two percent of the total leachate volume removed. The cumulative pumping pattern for the most and least productive extraction wells has been consistent since Year Two.

The performances of the nine extraction wells are summarized in Drawings 3, 4, 5, 9, 10, 11, 14, and 15. These drawings present the cumulative volume of leachate removed from the wells over time, as well as the leachate levels within the wells. These figures indicate that rates of leachate removal are variable, with higher leachate removal rates observed in the spring and fall, and lower removal rates observed in the summer and winter.

4.5.3 Lift Stations

Approximately 1,555,000 gallons of stormwater and condensate have been recovered from lift stations LS01 and LS02 since the LCS began operation in December 1997 (see Table 3 and Drawing 13). This volume currently represents 26 percent of the total volume of liquid removed by the leachate collection system. However, lift station LS02 has been dry since April 1998.

4.6 ANALYTICAL DATA

Leachate samples are collected quarterly from the leachate holding tank and analyzed for metals, general water quality parameters, and organic toxic pollutants listed in the leachate disposal permits (Permit Nos. 1995-EE-4467, 2000-EE-0837, and 2005-EE-3767).

According to the permits, leachate samples must be collected and analyzed for partial scan parameters (metals and conventional water quality parameters) on a quarterly basis. In addition, leachate samples must be collected and analyzed for full scan parameters (metals, conventional water quality parameters, and organic toxic pollutants) semi-annually. During the Eleventh Year of operation leachate samples were analyzed according to the following schedule:

Date	Analysis	Analytical Parameters ³
05/14/08	Full Scan	Metals, water quality parameters, and organic toxic pollutants
08/27/08	Partial Scan	Metals, and water quality parameters
11/19/08	Full Scan	Metals, water quality parameters, and organic toxic pollutants
01/21/09	Partial Scan	Metals, and water quality parameters

Metals include: Arsenic, Barium, Boron, Cadmium, Chromium (total), Copper, Iron (total), Lead, Manganese, Mercury, Nickel, Selenium, Silver, and Zinc.

Conventional Water Quality Parameters include: Ammonia (as Nitrate), Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Cyanide, Oil and Grease, pH, Phenols, Total Dissolved Solids (TDS), and Total Suspended Solids (TSS).

Organic Toxic Pollutants include: Volatile Organic Compounds, Acid Compounds, Base/Neutrals, and Pesticides as defined in 40 Code of Federal Regulations (CFR) 122.

The leachate analytical results are summarized in Table 5, with the leachate analytical results during the Eleventh Year of LCS operations provided in Appendix B. The data indicate

³ Leachate analytical parameters are based on the more inclusive IEPA Form N (Waste Characterization) requirements.

some variation in analyte concentrations between the sampling events. Eight volatile organic compounds (VOCs) (i.e., acetone, benzene, 2-butanone, chlorobenzene, ethylbenzene, 4-methyl-2-pentanone, toluene, and xylene) and four semivolatile organic compounds (SVOCs) (i.e., benzoic acid, 1,4-dichlorobenzene, diethylphthalate, and 3&4-methylphenol) have been detected in leachate during Year Eleven. This represents an increase compared to the number of VOCs detected in Year Ten which had detections of acetone, 2-butanone, 4-methyl-2-pentanone, methylene chloride, toluene, and xylene. However, the number of SVOCs detected in leachate during Year Eleven were fewer than in Year Ten which had detections of bis (2-ethylhexyl) phthalate, diethylphthalate, 2-methylphenol, 3&4-methylphenol, and phenol.

5.0 LANDFILL GAS O&M

5.1 DESCRIPTION

Historically, LFG venting occurred through thirty LFG vents that were installed in the 1980s on the Blackwell Landfill. In 1997, nine gas extraction wells⁴ were installed that conveyed LFG via gas header pipes to a 15-foot high passive vent stack constructed on top of Mount Hoy. In 2000, the LCS and LFG systems were augmented so that twelve of the LFG vents were connected to the main vent stack by new gas header pipes. An additional thirteen existing LFG vents were capped⁵ as part of the augmentation. Following augmentation, the main vent stack was the sole outlet for LFG emissions.

5.2 INSPECTION AND MAINTENANCE RECORDS

The LFG inspection and maintenance requirements for the Blackwell Site are outlined in the February 1999 Final O&M Plan, with modifications provided in the First and Second Year Reports.

The inspection and maintenance requirements include the following:

- Routinely verifying integrity and proper operation of system components;
- Recording system performance data;
- Scheduling LFG testing; and
- Performing maintenance and scheduling system repairs or modifications.

The inspection, monitoring and maintenance activities are documented on forms on an as-needed basis. Copies of the applicable O&M forms are provided in Appendices A-2, A-3, and A-5.

During the Eleventh Year, the components of the LFG extraction system were inspected on a weekly, monthly, quarterly, semi-annual, annual, and as-needed basis in accordance with the schedule provided in Table 7. The main vent stack was inspected by the O&M operator on a weekly basis, while components of the LFG extraction wells were inspected on a monthly basis. All components of the main vent stack or LFG extraction wells were found to be functioning properly during each inspection.

⁴ The nine extraction wells serve a dual purpose of extracting both leachate and landfill gas.

⁵ Prior to augmentation, 30 landfill gas vents and 6 inactive flare vents existed. Landfill gas vents SV-3, SV-10, DV-1, DV-2, and DV-12 and inactive flare vents FV-1, FV-2, FV-3, FV-4, FV-5, and FV-6 were abandoned as a part of the August 2000 LCS and LFG augmentation.

5.3 FIELD AND ANALYTICAL DATA

Starting in January 1998, landfill gas was monitored monthly for gas composition, static pressure, velocity, flow rate and temperature. Since March 2001, the LFG has been monitored with field instruments bimonthly at the main vent stack and LFG vents. The accumulated data are provided in Tables C-1 through C-6 in Appendix C.

The following four sampling events were conducted during the Eleventh Year of LFG venting system operation to monitor LFG quality:

Date	Sample Name
05/14/08	BW-LFGSTACK-46A
09/10/08	BW-LFGSTACK-47A
11/19/08	BW-LFGSTACK-48A
01/21/09	BW-LFGSTACK-49A

Landfill gas samples were collected from the main vent stack using 6-Liter Passivated Summa canisters and submitted for laboratory analysis. One LFG sample was collected during each sampling event.

The Summa canister samples were analyzed for fixed gases including methane, carbon dioxide, oxygen, and nitrogen in accordance with American Society for Testing and Materials (ASTM) Method D1945, and for total non-methane organic compounds (TNMOC) as methane in accordance with U.S. EPA Modified Method 25C. The analytical results for historic and recent LFG sampling events are summarized in Table 6. The analytical reports for the Eleventh Year of LFG operations are provided in Appendix D.

In December 2005, MWH began taking landfill gas samples in accordance with the July 7, 2005 *Revised Landfill Gas Trigger Level Report* (MWH, 2005e). This included analyzing the samples for VOCs (Method TO-14/TO-14A) in addition to methods ASTM D-1945 and EPA 25C.

Landfill gas samples have been collected once every quarter from the main vent at the Blackwell Landfill, since January 1998. Typically the results show 50 to 60 percent methane and also several volatile organic compounds in the parts per million and parts per billion ranges. A change was noted in the June 2006, August 2006, February 2007 and May 2008 sample results which showed methane concentrations that were much lower than expected. For these four LFG sampling events, the percent methane was reported at between 0.00021 percent and 3.1 percent. TNMOC concentrations were reported as less than 1 part per million (ppm) in three of these four sampling events, which was also unusual, since TNMOC results are usually variable and above 1 ppm.

Landfill gas sampling results have consistently remained below carcinogenic and hazard risk quotients since the risk assessment approach was implemented. The sudden decrease in methane and TNMOC concentrations during the four sampling events, mentioned above, suggested that either LFG production had significantly dropped off or that there might be a

problem with the LFG system. Prior to 2006, LFG sample results showed little variability in these analyses. Because of the variable results the District directed MWH to investigate the cause for the apparently random decreases in LFG concentration.

MWH reasoned that there could be several potential causes for the unexpectedly low LFG results. These include; a malfunctioning LFG collection system, laboratory error, and sampling error. The first two explanations seem unlikely because the flow velocity and methane concentrations measured in the field at the stack remain consistent between bimonthly O&M measurements and also the review of the laboratory data does not indicate any of the data is unusable.

Variability in LFG sample results did not begin until after December 2005, after the sampling protocol switched from grab to time-weighted sampling. MWH contacted Air Toxics, the laboratory that analyzes the LFG samples, to discuss the possibility that the flow regulator may be the cause of the problem. Air Toxics confirmed that sample variability is usually attributed to the use of a flow regulator. Each regulator contains a thin capillary tube that restricts the flow of air to the summa canister. Air Toxics reports that occasionally this capillary tube becomes damaged during shipment. The laboratory does not check each regulator upon receipt, unless a client requests it. This appears to be the most likely cause of the variable sample results.

Beginning with the September 2008 LFG sample, MWH has requested that Air Toxics inspect the flow regulator upon receipt after each sampling event. In all subsequent sampling events, the regulators were received in good condition with no damage to the capillary tube. All samples showed sampling results within the normal range of methane percentages and TNMOC concentrations at the Blackwell Landfill.

The data indicate the landfill gas collection system is operating properly and the variable results detected during the June 2006, August 2006, February 2007, and May 2008 gas composition sampling events were likely caused by faulty regulators damaged during shipment. It is important to note that all landfill sampling results have consistently shown no risk to recreational users at the Blackwell Landfill.

MWH submitted the *Draft Addendum No.9, Quality Assurance Project Plan, Replacement of LFG Primary Analytical Laboratory Provider* (MWH, 2009a) to the U.S. EPA on February 20, 2009. This addendum was prepared for the purpose of changing the primary analytical laboratory from Air Toxics to STAT Analysis Corporation of Chicago, Illinois for the analysis of landfill gas samples at the Blackwell Site. STAT Analysis Corporation will be used to analyze landfill gas samples upon approval of the addendum by the U.S. EPA.

5.4 LFG EMISSIONS

Gas emissions from the LFG vents were monitored on a monthly basis between January 1998 and March 2001 and bimonthly since then. The monitoring consists of using field instruments to measure LFG flow velocities at the main vent stack and to measure static gas pressure at the extraction wells and individual LFG vents. The individual LFG vents are

connected to the main vent stack through a series of conveyance piping. The Eleventh Year bimonthly static pressure data and velocity for the main vent stack and for the gas vents are summarized in Landfill Gas Vent Monitoring Forms (Appendices A-2 and A-5), and on Tables C-3 and C-4 in Appendix C.

The gas velocity at the main vent stack was converted to flow rate by multiplying the gas velocities by the cross-sectional area of the stack. A summary of the calculated flow rates is provided in Table C-5 in Appendix C. The variation in gas flow rate measured over time is presented in Drawing 17. Landfill gas emissions from the main vent stack increased following augmentation of the LFG system in August 2000 when twelve LFG vents were connected to the main venting system.

The variation in static LFG pressures in the extraction wells and LFG vents are presented in Table C-3 and in Drawings 18 through 20. The static pressures in the extraction wells exhibit low variability over time, with measured static pressures generally less than 1.0 inch of water, with the exception of EW-7. Landfill gas pressures measured greater than or equal to 1.0 inch of water during three of the six O&M events for EW-7 during Year Eleven.

The LFG vents show greater variation in static gas pressure. During the Eleventh Year monitoring period, static gas pressures in the LFG vents ranged from 0.0 to 4.0 inches of water. This static gas pressure range is similar to the pressure ranges in Year Ten (i.e., 0.0 to 5.2 inches of water), and is within the range of the previous pressure ranges in years past (i.e., 0.0 to 8 inches of water).

The variation in methane content is shown in Drawings 21 through 23. In some of the extraction wells and vents, methane content showed little variability (e.g., SV-8, DV-18, and EW-1). Total methane content at these individual extraction wells and vents was within 10 percent for all measurements conducted during Year 11. However, other extraction wells and vents (e.g., DV-5, DV-15, and EW-1A) showed more variability during Year 11 with total methane contents varying by as much as 60 percent. During Year Eleven, the maximum methane content remained between approximately 55 percent and 75 percent of the total LFG in most of the extraction wells, approximately half of the vents, and in the main vent stack. However, the remaining one-half of the vents had a maximum methane content between zero and 10 percent during Year 11.

5.5 LFG TRIGGER LEVELS

At the request of the U.S. EPA, the District conducted a trigger level evaluation and LFG emission modeling to determine whether LFG emissions posed a risk to recreational users of the Blackwell Landfill. The information derived from the evaluation was used to prepare the *Final Landfill Gas Trigger Level Report* (MWH 2006a) which presents trigger levels for possible additional remedial actions should LFG concentrations or flow rates increase in the future at the Blackwell Site.

Four tables (Tables 6A through 6D) showing the cumulative risk of exposure to Blackwell landfill gas are provided with this report and show that no landfill gas trigger levels were exceeded in May 2008, September 2008, November 2008 or January 2009. The tables were prepared using a U.S. EPA approved method and indicate that the landfill gas is well below the levels for the Hazard Quotient (HQ) of 1 and carcinogenic risk of 1×10^{-6} .

6.0 EVALUATIONS AND RECOMMENDATIONS FOR THE LEACHATE COLLECTION AND LANDFILL GAS SYSTEMS

6.1 EVALUATION OF LCS

6.1.1 Trendline Analysis

The LCS consists of nine extraction wells, three lift stations, and twenty-five LFG vents that are used to monitor leachate levels. Leachate levels were measured in the wells and vents on a monthly basis between January 1998 and March 2001, and on a bimonthly basis ever since. In addition, leachate levels were measured in several of the LFG vents during the RI.

In order to evaluate the overall effectiveness of the LCS, a trendline analysis was performed over the entire period of data collection. For evaluative purposes, this analysis consisted of fitting a linear trendline to leachate elevation data with a downward trend indicated by a negative slope and an upward trend indicated by a positive slope. The trendline analyses for each well and vent by landfill area are included as Drawings 1 through 15.

Over the past eleven years of LCS operation the leachate elevations in the Blackwell Landfill have generally remained stable. From year to year, there is some variation in leachate levels with some vents and extraction wells showing an increasing trend, while others show a stable or decreasing trend. Cumulative leachate levels through Year Eleven show an increasing trend in four of seven extraction wells (leachate levels are not measured at EW-4 or EW-8) and twelve of the twenty-five LFG vents. The cumulative increase in leachate levels at these locations throughout the past eleven years may be attributed to the following two factors. The first is that there may be an increase in the amount of infiltration of precipitation through the cap. Landfill settlement may also be a cause for the increased leachate levels. As the landfill settles the pore spaces between soil grains are compressed which in turn causes the leachate levels to rise within the extraction wells. In May 2007, MWH had the extraction wells surveyed to check for settlement. There was significant settlement recorded at all of the extraction wells.

The LCS continues to remove the precipitation that infiltrates the cap and the landfill. A summary of the cumulative trends in leachate elevations is depicted in Figure 5. The LCS operation from the nine extraction wells and two lift stations has removed over 6,036,000 gallons of leachate.

6.1.2 Augmentation Requirements - Record of Decision

The previous year-end Reports on the LCS and LFG systems provided an evaluation of the criteria that would require augmentation of the LCS and LFG systems outlined in the September 30, 1998, ROD. This evaluation has been repeated below using the combined eleven years of data for LCS operations.

The September 30, 1998, ROD for the Blackwell Landfill describes the objectives of the LCS and provides guidelines for system augmentation. The LCS objectives and augmentation requirements are as follows:

- Section VI.C, page 31 of the ROD states that the objective of the LCS is to manage the threat of leachate migration and exposure through active leachate collection and off-site treatment and disposal.
- Section VII, page 37 of the ROD states that if data demonstrates that the leachate system is not effective in managing leachate, the system could be augmented with up to nine additional leachate extraction wells. Ineffective management of leachate was defined as leachate posing a direct exposure threat, or groundwater not being remediated in a reasonable amount of time. The groundwater cleanup goals are U.S. EPA Maximum Contaminant Levels (MCLs) and Illinois Class I Drinking Water Standards.
- Section VII, page 38 of the ROD provides the general criteria to be used to decide whether groundwater was being remediated in a reasonable amount of time. These criteria include existing contaminant levels, trends in contaminant concentrations, potential reduction in restoration time frames to less than 30 years, and potential for the contaminants in groundwater to meet regulatory standards and/or asymptotic levels throughout the plume.

An evaluation of the O&M data indicates that the LCS meets the objectives set out by the September 30, 1998, ROD. In addition, during groundwater monitoring events conducted over the past eleven years, analytical results have been consistent with past monitoring results and show a general trend of decreasing number of VOCs in groundwater outside the landfill. Analytical results presented in standalone groundwater sampling reports also indicate overall decreases in VOC concentrations in the groundwater. In fact, during the most recent groundwater sampling event conducted in March 2009, VOCs were not detected in any of the groundwater samples collected.

The results of the groundwater monitoring events are summarized in the *Long Term Groundwater Monitoring Program Summary Report* (MWH, 2005a) and the First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, Tenth, and Eleventh Round Long-Term Groundwater Monitoring Reports (Montgomery Watson 2001b, MWH 2002a, MWH 2002e, MWH 2003b, MWH 2004c, MWH 2005c, MWH 2006b, MWH 2006d, MWH 2007b, MWH 2008a, and MWH 2009d). In summary, no ROD criteria have been exceeded that would require augmentation of the LCS system.

6.1.3 Augmentation Requirements - O&M Plan

The previous Year-End Reports on the LCS and LFG systems provided evaluations of the modification and augmentation requirements which were outlined in the February 1999 Final O&M Plan for the Blackwell Landfill. This evaluation has been repeated below using the combined eleven years of data for LCS operations.

The February 1999 O&M Plan provided guidelines for modification or augmentation of the LCS that may include: increasing extraction rates in some areas, decreasing extraction rates or shutting down extraction in other areas, converting some of the previously installed LFG

vents to extraction wells, or constructing one or more new extraction wells. The specified criteria for system modification or augmentation are provided:

Criteria #1: Extraction wells that generate a small amount of leachate, in comparison to the total volume extracted from the landfill, would be proposed for removal or abandonment.

Two extraction wells (EW-4 and EW-6) have produced only 2.8 percent of the total volume of leachate removed from the landfill. EW-4 and EW-6 are candidates for possible removal. However, the District is voluntarily continuing leachate extraction from these two wells.

Criteria #2: Extraction wells which generate a large volume of leachate, and which demonstrate a decreasing trend in leachate levels in the well and surrounding monitoring wells and vents, would continue to be operated. However, if the drop in leachate levels are small in comparison to theoretical volume of extractable leachate (i.e., large volumes of leachate are extracted from an extraction well without a corresponding decrease in leachate levels in that same well), additional extraction wells may be installed in the general area.

Cumulative leachate levels show an increasing trend in four of the seven extraction wells through the Eleventh Year of operation. This cumulative trend is attributed to settlement of the landfill. In addition, the yearly volume of leachate extracted has increased in six of the nine extraction wells (Table 3) compared to last year. The increase in leachate extraction during Year Eleven as compared to Year Ten may be attributed to increased rainfall during Year Eleven. During the eleventh year of operation, the landfill received approximately 44 inches of rainfall compared to Year 10 when the landfill received approximately 25 inches of rainfall. Yearly leachate removal seems to correlate to annual rainfall (i.e. when rainfall increases so does leachate removal) as shown on Drawing 24. The District is proposing to continue monitoring the apparent trend in leachate levels. No additional extraction wells are planned at this time.

Criteria #3: Extraction wells which initially generate a large volume of leachate and show a significant drop in leachate levels in the extraction well, but which are surrounded by monitoring wells and vents which do not show any appreciable drop in their leachate levels, will be considered to be in an area with non-extractable leachate. These extraction wells will be proposed for removal or abandonment.

No extraction wells meet this criterion. The Year Two Report recommended that lift station LS02 be removed because it did not pump during the second or third year of operations. The pump in LS02 was subsequently removed during Year Three. However, during the eighth year of operation, a new pump was installed in LS02. This pump was installed in case any water is ever collected in LS02. However, the pump has not run because LS02 continues to be dry.

In summary, no modifications to the LCS operations are recommended for the upcoming year. It is proposed that the LCS system will continue for a twelfth year in the current configuration.

MWH recommends resuming leachate level collection at extraction wells EW-4 and EW-8. Leachate levels have not been collected at these two locations over the past several years due to the Blackhawk Environmental Company® pump wellhead configuration which prevented access of a water level meter. However, the pumps in these wells have been replaced with pumps manufactured by Clean Environment® and the corresponding wellhead configurations will be reconfigured to allow for leachate level measurement. MWH will resume collecting leachate levels at these two wells during the Twelfth Year of O&M operation after wellhead reconfigurations have been completed.

6.2 EVALUATION OF LANDFILL GAS

6.2.1 LFG Augmentation

The September 30, 1998 ROD provides for the possible augmentation of the LFG extraction system, with the installation of up to nine dual leachate and LFG extraction wells. The 1999 UAO also requires that the LFG extraction system manage the threat of LFG buildup, and potential LFG migration and exposure.

In August 2000, modifications were made to the LFG extraction system which included connecting selected LFG vents to the main LFG venting system, capping other selected LFG vents, and abandoning the remaining LFG vents. The U.S. EPA approved the work plan and proposed modifications in a March 24, 2000 letter.

No further augmentation of the LFG extraction system is recommended at this time.

6.2.2 Thermal Treatment

The February 1999 Final O&M Plan specifies that a flare would be installed on the main vent stack if the quantity of TNMOC exceeds set limits. The TNMOC limits are eight pounds per hour (35 Illinois Administrative Code [IAC] 218.301), and 25 tons per year (5.71 pounds per hour) of total VOCs in a severe ozone non-attainment area.

The calculated TNMOC emissions for the Eleventh Year of O&M operations are summarized in Table C-6 in Appendix C, and indicate a range of 0.05 to 0.20 pounds of TNMOC per hour (lb/hr). In comparison, the emissions range during previous years of O&M operations are shown in Drawing 25 and summarized in the table below:

O&M Year	Calendar Year	TNMOC (lb/hr)
1	1998	0.29 to 1.21
2	1999	0.37 to 0.89
3	2000	0.22 to 0.64
4	2001	0.20 to 0.36
5	2002	0.25 to 0.42
6	2003	0.25 to 0.32
7	2004	0.27 to 0.38
8	2005	0.23 to 0.38
9	2006	0.28 to 0.52
10	2007	0.23 to 0.37
11	2008	0.05 to 0.20

As shown in the table above, these results indicate that TNMOC emissions are below the limits set forth in the Final O&M Plan. Therefore, modifications to the LFG venting system are not required.

6.2.3 Passive vs. Active Gas Extraction

The February 1999 Final O&M Plan specifies that an active LFG extraction system would be installed if there was evidence of uncontrolled LFG releases through or around the landfill cover. Evidence of uncontrolled LFG releases were defined as odors in areas with no gas vents, stressed vegetation, gas releases from monitoring wells located outside of the landfill perimeter, or gas bubbling through saturated topsoil following a rainfall event.

Landfill gas has been observed over the past four years following rainfall events. The District is currently evaluating the results of the subsurface investigation performed in this area in February 2007 and April 2008. Ambient air samples were collected at this location in the past and indicate that there is no unacceptable risk from the landfill gas. At this time, the District and MWH do not recommend conversion of the passive LFG venting system to an active system.

6.3 O&M MONITORING FREQUENCY

The February 1999 Final O&M Plan specified the initial frequency of O&M monitoring for the various remedial actions completed at the landfill with the monitoring frequency varying from weekly, monthly, quarterly, and semi-annually depending upon the remedial component. The First Year and Second Year Reports on the Leachate Collection System and Landfill Gas Extraction System provided minor modifications to the O&M monitoring frequency. No modifications were made in the Third Year Report. After the fourth year of O&M operations, the characteristics of the remedial components at the Blackwell Landfill are reasonably well known.

Over the past eleven years there has been little variability in LFG pressure at the extraction

wells with the exception of EW-7 (Drawing 18). The LFG pressure at the majority of the individual shallow vents has been in the range of 0.0 to 1.0 inch of water with some variability at vents SV-4, SV-8, and SV-9 which have had LFG pressures in the range of 0.0 to 6.0 inches of water (Drawing 19). Similarly, most of the individual deep vents have had LFG pressures in the range of 0.0 to 1.0 inch of water, with the exception of DV-16 and DV-18 which have had LFG pressures in the range of 0.0 to 8.0 inches of water (Drawing 20).

Generally, maximum methane contents have remained between 60 and 80 percent of the total LFG over the past eleven years (Drawings 21-23), and LFG static pressures have been in the range of 0.0 to 8 inches of water. As well, there are no discernable trends in either LFG pressure or methane content.

Continued measurement of these parameters at a reduced frequency would still allow the District to determine whether maximum LFG pressures or methane contents were increasing. Therefore, consistent with the Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, and Tenth Year Reports on the LCS and LFG system (MWH 2002d, MWH 2003c, 2004e, and 2005d, 2006c, 2007c, and MWH 2008c) the following two modifications to the LFG O&M activities are recommended:

- Reduce the frequency of LFG monitoring at individual wells and vents from bimonthly to semi-annually (i.e., twice per year); and
- Monitor LFG flowrate at the main vent stack on a quarterly basis rather than a bimonthly basis to coincide with the quarterly LFG sampling program already in place.

6.4 WATER SEEPS EVALUATION

During the past four years of operation, the District and MWH observed breakouts of water on the north side of the landfill east of Lift Station 3 (Figure 4). These breakouts are observed downgradient of the Surface Water Collection Trench and are believed to be surface water migrating through either the vegetative cover or through permeable lenses beneath the vegetative cover. The District believes these permeable lenses may be remnants of past haul routes and staging areas constructed during the landfill's operation.

The District evaluated the suspected water migration in the northern area by conducting a subsurface investigation. The objective of this investigation was to find and map the extent of sand and gravel layers that may intercept infiltrating surface water and transport it to the location in which the breakout has been observed. Phase 1 of the subsurface investigation was completed in February 2007. Geoprobe™ borings were advanced to identify any layers of sand and/or gravel present within the cover; determine the cover thickness, as well as depths to buried waste. Phase 2 was conducted on April 17, 2008. A total of 12 Geoprobe™ borings were advanced near Lift Station 03. The results of these soil borings are being used

to design a second, deeper interceptor trench for installation in this area. The details for a new trench will be proposed to the Agencies prior to its installation.

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TABLES

Table 1
Leachate Levels
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-11	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9
6/21/1996	735.02	720.05	728.71	725.71	719.15	736.29	731.14	710.71	710.86	738.03	761.77	NA	752.29	736.05	701.9	695.82	730.83	747.44	723.54	719.12
7/23/1996	735.07	717.9	725.26	722.86	718.71	735.37	730.74	710.06	710.26	737.03	761.07	NA	751.54	736.05	704.91	696.12	730.06	746.84	722.89	720.07
10/21/1996	734.25	719.4	722.5	NM	715.86	732.77	729.84	710.86	711.11	737.63	762.17	NA	747.59	735.27	700.81	696.55	724.76	NM	722.39	715.19
11/19/1997	734.12	719.92	723.16	723.08	717.21	734.17	732.32	710.94	711.25	739.08	762.12	NA	746.79	735	699.56	695.74	746.91	749.79	724.84	719.72
1/15/1998	734.97	719.54	727.71	722.36	719.16	735.97	733.69	711.01	711.21	739.88	762.06	NA	752.09	735.25	701.51	695.87	726.36	746.54	724.34	718.82
2/18/1998	735.27	719.35	729.06	724.36	720.66	737.27	734.19	711.96	711.46	739.18	762.02	NA	753.84	735.05	703.01	695.67	725.86	750.19	725.09	720.97
3/10/1998	735.07	719	728.76	723.41	719.66	736.27	733.48	711.46	710.86	738.63	762.07	NA	753.39	734.65	703.46	696.72	724.21	754.94	723.99	720.17
4/14/1998	735.49	719.13	728.43	723.15	720.77	736.32	734.38	712.08	711.57	739.16	762.05	NA	748.46	735.55	705.3	696.75	724.16	NM	724.74	722.08
5/13/1998	735.62	713.6	727.06	723.61	720.01	735.87	734.24	711.81	711.46	739.16	762.12	NA	745.94	735.7	706.31	696.52	724.01	753.14	724.09	720.22
6/17/1998	734.57	719	725.76	720.66	718.96	735.17	729.04	711.61	711.36	739.03	762.07	NA	743.59	735.3	703.86	695.47	722.11	747.84	723.89	719.52
7/15/1998	734.37	719.14	725.31	720.68	720.11	730.67	734.24	711.76	711.56	739.02	762.12	NA	742.69	735.29	703.16	695.67	722.15	NM	724.17	719.7
8/11/1998	734.07	719	722.96	720.66	718.01	729.72	727.89	711.61	711.56	739.08	762.07	NA	740.74	735.35	702.16	695.52	721.06	746.89	724.09	718.97
9/15/1998	733.92	718.95	721.31	720.81	717.11	729.57	727.39	711.56	711.46	739.18	762.07	NA	741.04	735.15	701.61	695.47	720.66	747.34	723.69	717.87
10/16/1998	733.97	719.1	721.26	720.71	716.51	728.97	727.34	711.66	711.56	739.08	762.1	NA	741.89	735.3	701.01	695.67	721.16	747.24	723.39	717.37
11/17/1998	734.07	719.05	722.31	721.91	716.76	729.97	726.59	711.66	711.41	739.28	762.12	NA	744.74	731.65	702.31	696.92	722.11	747.14	722.49	719.52
12/21/1998	734.26	719.18	723.16	720.84	716.8	730.03	726.19	711.79	711.88	738.42	760.87	NA	741.08	734.28	702.03	695.61	721.81	745.01	722.33	716.97
1/12/1999	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM
2/17/1999	734.51	719.25	726.08	720.92	717.95	731.76	730.99	712.39	711.88	738.68	760.91	NA	747.1	733.98	705.2	696.21	721.96	745.07	724.39	719.52
3/24/1999	734.31	719.18	726.01	720.97	718	731.86	730.59	712.44	711.78	738.52	760.91	NA	750.64	733.73	705.02	695.79	720.7	745.07	722.53	718.37
4/16/1999	734.66	719.3	727.46	720.77	718.55	732.81	730.79	712.94	712.23	739.26	760.93	NA	751.29	733.73	704.24	697.21	720.51	745.12	724.38	719.42
5/17/1999	734.56	719.15	727.48	721.37	718.8	731.71	730.74	713.09	712.13	738.93	760.98	NA	752.29	733.98	706.5	697.01	720.01	745.12	724.63	719.22
6/22/1999	734.41	719.25	725.68	720.97	718.4	731.86	733.39	712.89	712.08	738.53	760.96	NA	750.99	733.98	705.55	696.26	721.01	745.17	721.93	718.07
7/22/1999	734.11	719.35	727.43	720.92	717.38	NM	730.31	712.83	712.17	738.38	760.86	NA	751.14	731.98	705.6	695.73	721.49	747.27	723.56	717.19
8/25/1999	732.16	717.3	721.53	721.02	714.45	729.56	728.44	710.84	710.23	738.81	760.93	NA	743.74	731.78	701.25	693.91	719.51	745.47	720.78	714.37
9/29/1999	732.56	717.3	720.03		713.8	726.26	727.69	712.64	711.93	736.63	759.06	NA	737.64	731.63	699.05	696.63	721.21	745.77	720.55	713.32
10/27/1999	731.91	719		716.62	713.4	726.21	725.09	710.49	709.83	737.13	759.11	NA	737.34	731.38	698.9	694.01	717.56	745.62	719.48	713.12
12/1/1999	731.92	717.2	720.08	720.62	713.05	725.15	728.14	710.44	710.13	736.83	759.08	NA	736.16	731.2	699.5	693.78	718.41	745.75	717.63	712.49
12/29/1999	731.81	717.55	720.08	719.22	713.2	726.51	726.29	710.48	710.33	737.08	759.11	NA	736.14	731.18	699.07	694.15	717.76	745.1	719.18	713.22
1/25/2000	731.61	717.35	720.08	719.22	713.25	726.01	726.54	710.17	709.93	736.78	759.06	NA	736.54	730.98	699.05	694.11	719.26	745.22	718.73	713.02
2/29/2000	731.91	717.25	720.63	725.07	714.8	726.81	730.84	710.46	710.13	736.78	759.11	NA	739.84	731.38		695.16	719.61	745.77	720.33	718.17
3/24/2000	730.91	717.4		725.32	713.35	725.33	726.14	712.39	711.95	735.53	757.84	NA	740.51	729.81		696.26	714.13		719.69	716.97
4/28/2000	733.91	719.2	724.67		717.49	730.21	732.77	712.32	711.71	738.69	759.71	NA		732.72	702.9	697.9	717.31		723.51	719.65
5/29/2000	734.11	719.2	722.13	720.77	716.7	729.69	727.04	712.49	711.73	738.63	760.91	NA	744.94	732.88	701.65	697.11	717.35	NA	722.98	715.97
6/29/2000	734.26	719.6	722.41	725.88	717.38	731.76	729.59	712.63	711.83	738.68	760.91	NA	742.16	732.85	701.98	695.94	717.41	NA	724.03	717.57
7/27/2000	734.16	719.4	721.68	719.92	716.67	730.13	729.79	712.69	711.93	739.13	761.01	NA	740.09	732.92	701.31	696.29	717.58	NA	722.91	716.17
9/28/2000	NM	719.33	NA	727.31	715.84	727.86	729.28	712.28	711.72	738.36	760.92	NA	NA	732.92	700.38	NA	716.66	740.59	723.45	716.59
10/26/2000	733.99	719.36	NA	725.8	715.79	729.11	729.21	711.58	711.97	738.73	760.97	NA	NA	733.17	700.03	702.02	717.01	NA	722.48	715.38
11/30/2000	734.07	719.74	NA	725.16		727.21	728.89	712.43	711.82	738.78	760.92	NA	NA	733.22	700.55	701.25	716.51	NA	723.68	718.71
12/20/2000	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM

Notes:

1. NM = not measured for particular date
2. NA = not analyzed as a part of O&M activities
3. Blank cells indicate that no leachate was recorded at particular location
4. Due to new wellhead configuration, leachate level can not be measured in EW-8.
5. Leachate elevations measured on 1-12-99, collected during hostile weather conditions, were omitted from this table due to suspect inaccuracies caused by temperature related equipment failure.
6. Leachate elevations were not measured at several SVs or DVs on 1-12-99, 12-20-00, 1-24-01, 1-17-02, 1-30-03, 1-28-04, 1-19-05, 1-10-07, 3-10-08, and 1-21-09 due to frozen flush mount vaults.
7. Leachate elevations were not measured at SV-4 and DV-9 on 3-12-07 due to flooded vaults.
8. Leachate elevations were not measured at several vaults on 1-9-08 and 3-9-09 due to flooded vaults.

Table 1
Leachate Levels
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-11	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9
1/24/2001	NM	716.14	NA	NM	NM	NM	NM	712.73	NM	NM	760.97	NA	NA	733.62	699.73	702.10		NM	NM	717.41
2/20/2001	734.14	717.72	NA	720.46	717.29	729.56	728.21	713.03	712.02	NA	760.97	NA	NA	732.97	704.25	701.55	716.76	NA	726.93	718.86
3/21/2001	734.34	NM	NA	NM	NM	727.56	729.31	713.2	710.07	738.78	760.87	NA	NA	733.37	705.05	702.15	716.76	NA	727.63	722.46
5/31/2001	734.29	719.44	NA	726.16	718.34	728.96	729.11	713.13	713.02	738.68	760.92	NA	NA	732.92	703.4	701.75	716.76	NA	727.18	718.71
7/12/2001	734.34	719.24	NA	721.62	716.15	728.72	729.31	713.58	712.22	739.18	761.14	NA	NA	733.30	702.05	NM	716.98	NA	722.43	716.41
9/20/2001	735.23	719.84	NA	727.36	716.99	728.31	726.91	713.51	714.91	739.00	761.17	NA	NA	732.86	701.72	699.45	716.98	NA	727.12	718.93
11/7/2001	734.39	719.84	NA	727.73	717.5	730.11	727.86	713.83	712.28	739.63	756.2	NA	NA	733.49	703.66	699.1	717.01	NA	722.45	716.81
1/17/2002	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
3/28/2002	734.37	720.44	NA	724.46	718.24	729.26	733.43	714.38	712.59	740.13	761.22	NA	NA	733.25	703.55	698.65	717.31	NA	724.74	717.55
5/31/2002	734.24	721.34	NA	723.44	718.57	730.36	733.46	715.03	712.62	740.38	761.23	NA	NA	733.42	704.75	698.65	718.36	NA	726.11	717.56
7/11/2002	734.79	720.64	NA	724.96	717.49	729.96	728.31	714.25	712.37	739.18	761.22	NA	NA	733.41	703.5	NA	717.46	NA	726.38	718.31
9/26/2002	734.19	NM	NA	722.55	715.33	728.86	732.5	714.18	712.74	739.38	761.32	NA	NA	733.42	700.55	NA	717.91	NA	723.13	714.93
11/21/2002	733.86	721.24	NA	722.26	714.24	727.94	730.41	713.88	712.76	739.13	761.27	NA	NA	732.42	699.65	NA	718.06	NA	719.43	713.68
1/30/2003	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	718.06	NA	719.43	713.68
4/3/2003	733.64	720.99	NA	726.51	712.84	727.61	730.71	713.25	712.22	740.37	761.37	NA	NA	731.63	700.3	NA	NA	NA	721.23	717.01
6/5/2003	733.79	721.04	NA	724.46	715.39	729.16	730.71	713.53	712.27	741.38	761.32	NA	NA	733.07	703.55	NA	NA	NA	722.3	714.86
8/7/2003	NM	721.44	NA	722.36	714.39	727.26	730.71	714.73	712.17	739.28	761.82	NA	NA	732.62	700.55	NA	742.96	NA	718.93	713.71
9/25/2003	NM	721.39	NA	722.21	713.63	727.56	730.66	713.02	712.07	739.28	761.37	NA	NA	732.37	699.65	NA	742.26	NA	719.05	712.94
11/26/2003	NM	721.69	NA	729.11	714.04	727.51	730.46	713.58	712.12	739.13	761.32	NA	NA	742.62	699.55	NA	742.26	NA	727.43	718.31
1/28/2004	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
3/4/2004	NM	722.69	NA	731.26	715.56	728.46	731.61	714.63	712.27	739.18	761.32	NA	NA	732.92	701.25	707.85		NM	727.49	NM
5/6/2004	734.29	720.04	NA	725.86	717.94	728.66	731.21	714.78	712.57	739.58	761.42	NA	NA	733.62	704	708.35		NM	726.43	NM
7/22/2004	734.09		NA	724.95	716.67	727.84	730.25	715.33	NM	739.09	761.42	NA	NA	733.34	703.18	NM		NM	722.82	NM
9/2/2004	733.9	NM	NA	722.84	714.95	726.72		714.49	712.38	738.93	761.42	NA	NA	733.53	701.14			746.44	720.85	714.08
11/10/2004	733.68	NM	NA	722.74	713.96	727.33		716.14	712.55	738.78		NA	NA	732.77	699.53				719.05	712.83
1/19/2005	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
3/10/2005	734.35	723.44	NA	NM	NM	NM	NM	NM	NM	739.13	761.48	NA	NA	733.95	704.9	NM		NM	NM	NM
5/11/2005	734.28	722.73	NA	724.37	718.15	727.62	729.97	715.83	712.55	739.39	761.49	NA	NA	733.95	703.41	707.76			724.60	NA
7/14/2005	733.98	723.56	NA	722.62	715.59	727.27	731.06	715.70	712.62	739.20	761.46	NA	NA	733.14	700.75				721.03	714.27
9/14/2005	733.85	723.74	NA	722.25	714.12	727.47		714.84	712.58	739.04	761.47	NA	NA	732.80	699.55			746.52	719.26	712.98
11/9/2005	733.56	723.69	NA	722.21	713.33	725.94		713.87	712.44	738.79	761.41	NA	NA	732.13					719.77	712.22
1/11/2006	733.57	723.92	NA	724.58	712.82	725.67		714.29	712.39	738.73	761.39	NA	NA	732.12		707.73			722.02	715.95

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5. Leachate elevations measured on 1-12-99, collected during hostile weather conditions, were omitted from this table due to suspect inaccuracies caused by temperature related equipment failure.
6. Leachate elevations were not measured at several SVs or DVs on 1-12-99, 12-20-00, 1-24-01, 1-17-02, 1-30-03, 1-28-04, 1-19-05, 1-10-07, 3-10-08, and 1-21-09 due to frozen flush mount vaults.
7. Leachate elevations were not measured at SV-4 and DV-9 on 3-12-07 due to flooded vaults.
8. Leachate elevations were not measured at several vaults on 1-9-08 and 3-9-09 due to flooded vaults.

Table 1
Leachate Levels
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-11	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9
3/8/2006	733.55	724.19	NA	729.66	718.11	726.58		715.77	712.73	738.88	761.41	NA	NA	733.21	699.71	707.75			726.73	723.56
5/8/2006	734.24	723.99	NA	733.88	719.61	727.79		716.13	712.45	738.59	761.44	NA	NA	733.68	702.09				726.85	722.88
7/12/2006	734.17	722.02	NA	724.31	718.10			715.81	712.52	738.41	761.41	NA	NA	733.69	701.76				723.83	714.90
9/5/2006	733.94	722.10	NA	723.93	713.32	729.42	729.68	715.47	712.47	738.16	761.42	NA	NA	733.23	700.25		742.94	747.61	721.64	713.38
11/8/2006	734.21		NA	733.06	721.67	728.96	730.07	716.30	712.95	738.81	761.39	NA	NA	733.82	701.45	707.73			727.38	723.06
1/10/2007	734.60		NA	NM	NM	731.94	729.64	717.64	NM	738.17	NM	NA	NA	NM	706.16	NM	742.98	NM	NM	NM
3/12/2007	734.44		NA	NM	723.78	730.56	729.53	717.73	713.13	741.70	761.48	NA	NA	734.15	707.03	708.23	745.41	747.59	726.60	NM
5/9/2007	734.41		NA	733.05	720.66	729.33		717.52	713.38	739.63	761.47	NA	NA	734.52	706.48				727.10	720.96
7/11/2007	733.82		NA	725.11	713.46	730.00		716.92	713.12	739.23	761.42	NA	NA	733.50	702.30				722.99	714.92
9/12/2007	730.68		NA	726.56	713.42	729.08		716.73	712.95	738.68	761.41	NA	NA	733.66	700.86				721.36	714.09
11/14/2007	733.61		NA	724.96	712.58	729.33	730.36	716.35	713.32	739.14	761.48	NA	NA	733.14	699.53	707.58	742.94	747.59	720.15	712.71
1/9/2008	NM		NA	NM	724.15	729.22	730.54	719.17	725.87	738.65	761.46	NA	NA	732.85	NM	717.97	743.02	747.62	727.62	NM
3/10/2008	734.11		NA	NM	NM	730.84	729.67	NM	NM	738.55	761.48	NA	NA	733.52	NM	NM	743.22	747.63	NM	NM
5/14/2008	733.79		NA	NM	724.25	731.84	730.39	718.07	713.93	738.41	761.53	NA	NA	733.81	NM	715.20	742.93	746.62	727.61	NM
7/9/2008	734.16		NA	727.65	718.82	731.17	729.95	717.37	713.78	738.16	761.52	NA	NA	733.10	703.39	707.77	742.95	746.55	724.43	716.23
9/10/2008	734.07		NA	726.36	713.64	730.85		716.68	713.43	737.39	761.39	NA	NA	732.36	700.68				721.89	713.98
11/19/2008	734.27		NA	728.17	722.76	728.86	731.94	717.59	713.82	737.38	761.47	NA	NA	733.09	702.63	707.73		746.42	727.05	723.24
1/21/2009	NM	NM	NA	NM	NM	728.74	731.60	NM	NM	737.67	NM	NA	NA	NM	NM	707.76	NM	746.58	NM	NM
3/9/2009	NM		NA	NM	724.28	730.20	731.43	720.84	715.04	737.93	761.58	NA	NA	733.51	NM	709.05	NM	746.24	727.42	NM

Notes:

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6. Leachate elevations were not measured at several SVs or DVs on 1-12-99, 12-20-00, 1-24-01, 1-17-02, 1-30-03, 1-28-04, 1-19-05, 1-10-07, 3-10-08, and 1-21-09 due to frozen flush mount vaults.
7. Leachate elevations were not measured at SV-4 and DV-9 on 3-12-07 due to flooded vaults.
8. Leachate elevations were not measured at several vaults on 1-9-08 and 3-9-09 due to flooded vaults.

Table 1
Leachate Levels
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
6/21/1996	739.01	750.32	700.67	712.85	NM	NM	NM	NM	NM	714.45	709.73	714.84	724.63	713.48	755.91	712.99	720.01	750.71
7/23/1996	738.71	750.72	704.65	711.7	720.1	700.76	700.84	707.19	NM	714.25	709.73	716.24	727.53	713.28	756.31	714.29	719.21	750.31
10/21/1996	735.97	747.29	700.38	712.63	716.7	698.61	NM	708.16	727.94	719.85	715.18	721.54	731.43	NA	760.71	720.89	725.11	749.21
11/19/1997	734.73	746.75	NA	712.45	717.65	701.11	702.33	713.43	NM	716.55	713.1	720.94	730.21	NA	NA	719.38	723.98	746.23
1/15/1998	738.76	751.42	NA	712.67	717.5	699.06	702.04	706.46	728.54	NM	709.83	719.54	734.06	NA	749.91	719.39	723.81	751.21
2/18/1998	737.26	753.17	NA	713.6	717.75	700.31	702.09	706.59	729.14	715.08	713.78	722.49	733.73	NA	736.76	719.14	723.41	753.21
3/10/1998	735.76	751.77	NA	712.65	717.15	700.61	701.89	706.29	728.84	713.58	713.73	713.59	731.4	NA	738.61	717.69	721.21	NM
4/14/1998	737.04	750.96	NA	713.42	717.46	701.32	702.04	706.87	731.84	714.71	713.8	724.44	732.76	NA	752.84	719.54	722.01	749.82
5/13/1998	737.17	745.47	NA	713.2	717.3	701.91	701.89	706.94	732.89	716.48	711.83	719.44	725.8	NA	740.36	716.99	719.26	744.61
6/17/1998	736.56	748.42	NA	713.15	717.25	700.66	702.29	707.09	NM	714.58	712.73	720.94	726.93	NA	739.96	720.19	724.66	744.81
7/15/1998	738.7	742.57	NA	712.95	717.4	700.8	701.99	707.34	NM	714.68	712.08	720.62	727.28	NA	725.41	720.19	718.16	742.79
8/11/1998	735.41	740.32	NA	713	717.55	699.61	701.94	707.29	729.14	714.73	710.81	716.86	725.8	NA	732.81	719.79	717.71	741.14
9/15/1998	732.66	740.92	NA	712.9	718.05	699.11	701.94	707.14	727.74	714.53	710.78	717.74	725.48	NA	734.51	716.24	716.21	740.76
10/16/1998	733.51	741.87	NA	713.1	718.35	698.86	NM	705.29	728.99	714.58	710.38	716.54	724.38	NA	736.06	718.79	715.21	741.21
11/17/1998	734.86	744.62	NA	713	718.55	699.66	701.84	707.04	728.59	714.48	713.63	717.79	726.53	NA	734.26	719.19	717.21	744.66
12/21/1998	735.03	740.89	NA	713.03	718.76	699.5	702.07	706.96	736.99	714.42	711.68	717.02	726.27	NA	734.25	713.54	715.64	NA
1/12/1999	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NA	NM	NM	NM	NA
2/17/1999	734.88	747.12	NA	713.43	718.48	701.4	702.07	706.96	738.89	714.53	713.68	721.59	732.03	NA	736.86	716.24	717.81	NA
3/24/1999	735.78	749.82	NA	713.76	718.03	701.25	702.07	706.91	739.99	714.52	713.76	723.75	732.03	NA	730.52	715.23	717.41	NA
4/16/1999	739.48	750.5	NA	714.43	718.13	701.45	702.07	707.11	740.09	714.6	713.41	720.99	732.92	NA	736.54	716.84	716.86	NA
5/17/1999	737.03	751.42	NA	713.93	717.78	702.05	702.17	707.51	740.59	NA	711.58	716.34	732.53	NA	734.16	716.49	713.11	NA
6/22/1999	734.03	752.27	NA	713.73	717.63	701.55	702.07	707.51	739.99	714.51	713.68	725.04	731.98	NA	735.81	715.94	714.41	NA
7/22/1999	737.73	752.37	NA	NM	717.88	NM	702.13	707.56	740.78	714.73	NM	715.84	732.33	NA	735.01	716.74	720.11	NA
8/25/1999	729.18	743.27	NA	713.63	718.33	697.1	702.02	705.61	740.44	714.58	710.98	724.24	726.93	NA	731.56	713.87	713.41	NA
9/29/1999	731.98	737.2	NA	711.23	716.48	698.1	701.07	707.51	739.04	715.83	NM	719.7	732.08	NA	726.51	716.09	714.51	NA
10/27/1999	726.48	736.97	NA	711.18	716.68	696.5	702.07	705.61	740.19	714.51	710.48	721.84	733.83	NA	727.41	717.99	709.61	NA
12/1/1999	726.08	736.05	NA	710.68	716.49	696.5	702.07	705.66	741.59	714.36	709.43	717.13	727.82	713.01	716.21	712.28	NM	NA
12/29/1999	728.38	736.15	NA	711.4	716.93	696.58	702.05	705.68	740.89	714.33	710.98	713.89	729.88	NA	710.41	717.11	714.31	NA
1/25/2000	727.78	736.42	NA	710.78	716.63	696.5	702.07	705.21	741.94	714.83	713.03	723.14	731.63	NA	724.61	712.14	714.36	NA
2/29/2000	728.23	739.42	NA	711.28	716.33			705.21	741.24	714.93	713.83	723.04	728.13		726.61	713.19	713.21	NA
3/24/2000	726.41	740.92	NA	710.43	717.98		702.07	707.1	740.24	712.61	708.64	713.55	722.53	NA	720.02	714.44	710.99	NA
4/28/2000	725.26	743.67	NA	713.88		700.2	702.07	706.9	742.84	714.36	711.8	714.22	730.43	NA	722.68	710.31	712.89	NA
5/29/2000	721.63	743.92	NA	713.63	717.68	699.3	702.07	707.1	742.74	713.86	711.85	717.07	726.93	NA	723.02	711.99	712.69	NA
6/29/2000	721.11	741.56	NA	713.82	717.73	699.28	702.08	707.13	742.84	715.31	711.2	715.87	729.9	NA	730.1	711.19	712.6	NA
7/27/2000	722.73	739.84	NA	714.13	717.98	699	702.17	707.31	742.78	715.19	711.9	716.92	727.05	NA	722.5	712.95	712.63	NA
9/28/2000	723.25	738.25	NA	712.39	714.76	696.37	701.8	706.92	741.33	714.56	713.4	713.78	727.4	NA	717.5	717.09	713.7	NA
10/26/2000	721.4	738.55	NA	713.09	714.27	697.92	702.05	707.22	741.78	714.71	711.2	720.84	728.3	NA	722.72	712.21	712.47	NA
11/30/2000	721.7	740.2	NA	712.69	714.57	698.47	702.05	706.97	741.43	714.76	712.05	717.82	722.38	NA		715.08	712.54	NA
12/20/2000	NM	NM	NA	NM	NM	NM	NM	NM	NM	715.81	713.35	722.82	722.93	NA	NM	713.58	712.39	NA

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7. Leachate elevations were not measured at SV-4 and DV-9 on 3-12-07 due to flooded vaults.
8. Leachate elevations were not measured at several vaults on 1-9-08 and 3-9-09 due to flooded vaults.

Table 1
Leachate Levels
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
1/24/2001	NM	NM	NA	713.64	NM	698.22	714.95	706.97	741.53	715.61	713.03	720.62	725.18	NA	725.02	713.68	713.89	NA
2/20/2001	721.55	745.7	NA	713.84	713.72	701.02	719.95	707.07	741.73	714.81	713.35	720.02	NM	NA	723.47	715.58	711.69	NA
3/21/2001	723.75	745	NA	713.79	717.92	701.37	722.55	NM	741.58	NM	NM	720.02	727.33	NA		NM		NA
5/31/2001	723.25	744.5	NA	712.29	715.92	702.47	720.15	709.32	744.83	713.16	713.35	718.17	728.33	NA	723.32	717.28	712.39	NA
7/12/2001	722.90	738.97	NA	715.04	717.54	699.57	712.02	707.87	741.63	760.52	713.26	717.38	728.61	NA	723.32	718.43	712.45	NA
9/20/2001	724.60	737.88	NA	714.39	717.93	698.50	706.07	707.87	742.23	712.71	NA	716.20	723.93	NA	731.32	715.08	712.59	NA
11/7/2001	723.12	744.85	NA	715.72	718.37	700.97	708.15	708.22	742.99	712.56	713.45	717.98	726.92	NA	725.17	720.28	712.44	NA
1/17/2002	NM	NM	NA	NM	NM	NM	NM	NM	NM	714.78	713.2	716.17	724.33	NA	728.26	719.28	712.39	NA
3/28/2002	723.32	749.95	NA	718.52	719.32	700.82	716.16	708.57	743.22	713.26	713.55	717.95	726.23	NA	726.67	719.98	712.29	NA
5/31/2002	724.5	750.8	NA	717.24	718.52	701.53	717.3	708.82	743.38	713.61	713.71	715.97	730.11	NA	726.37	720.41	712.34	NA
7/11/2002	725.65	746.6	NA	715.9	717.87	700.82	712.55	708.62	742.78	715.01	713.82	716.42	728.48	NA	726.77	720.33	712.34	NA
9/26/2002	722.64	739.19	NA	715.99	718.32	698.63	708.13	709.02	742.83	715.91	713.46	716.9	724.38	NA	724.47	NM	712.39	NA
11/21/2002	721.15	748.25	NA	715.24	718.82	697.87	707.05	708.67	739.78	717.36	713.33	717.07	723.38	NA	726.77	721.48	712.37	NA
1/30/2003	721.15	748.25	NA	715.24	718.82	697.87	707.05	708.67	739.78	717.36	713.33	717.07	723.38	NA	726.77	721.48	712.37	NA
4/3/2003	724.6	737.65	NA	714.29	718.55	697.69	724.65	708.07	742.63	721.66	711.82	715.5	718.03	NA	725.93	720.93	712.19	NA
6/5/2003	722.85	748.1	NA	726.29	718.12	701.07	714.65	708.27	742.73	721.31	711.85	722.22	722.83	NA	726.42	724.48	712.79	NA
8/7/2003	721.1	748.1	NA	715.99	717.77	698.87	713.6	708.22	743.13	721.91	711.15	712.72	718.08	NA	728.82	721.88	713.19	NA
9/25/2003	717.3	739.8	NA	715.64	717.68	697.62	709.6	707.92	743.33	722.06	712.45	721.17	718.38	NA	728.47	721.53	712.94	NA
11/26/2003	NM	743.7	NA	714.69	718.45	700.77	723.5	706.3	NM	721.86	713.64	713.12	717.43	NA	728.49	721.98	712.69	NA
1/28/2004	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NM	718.13	NA	728.19	721.98	712.44	NA
3/4/2004	NM	751.5	NA	714.29	720.72	699.17	718.85	702.57	NM	721.81	713.84	710.32	724.8	NA	728.32	724.38	711.99	NA
5/6/2004	NM	NM	NA	719.39	718.22	701.47	716.65	708.47	NM	714.71	714.05		721.03	NA	727.62	720.68	712.64	NA
7/22/2004	NM	749.1	NA	NM	718.17	NM	716.75	707.17	NM	720.27	713.83	716.49	725.71	NA			712.499	NA
9/2/2004	727.57	746.68	NA	718.59	718.07	699.48	712.52	705.57	744.53	721.56	713.63	715.31	723.03	NA	727.62	719.82	712.67	NA
11/10/2004	720.53	745.63	NA	718.67	718.34	697.67	708.92	708.63	744.88	720.13	712.69	717.04	717.84	NA		721.53	712.59	NA
1/19/2005	NM	NM	NA	NM	NM	NM	NM	NM	NM	716.35	713.8	716.8	728.32	NA	723.17	722.09	712.73	NA
3/10/2005	NM	NM	NA	NM	NM	NM	NM	NM	NM	715.87	713.87	717.5	730.17	NA	722.82	722.5	712.82	NA
5/11/2005	NA	752.41	NA	719.89	720.17	701.03	712.80	705.85	NA	719.71	713.56	714.28	720.68	NA	721.78	722.02	712.68	NA
7/14/2005	721.14	739.19	NA	719.26	719.11	698.95	707.50	708.69	746.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/14/2005	721.04	738.58	NA	718.27	719.28	697.39	705.30	708.46	745.21	721.87	713.74	721.47	717.59	NA	721.59	NM		NA
11/9/2005	716.42	737.99	NA	719.54	719.29	696.95	703.74	708.06	745.62	721.85	713.14	718.38	717.23	NA	722.97	722.88	712.71	NA
1/11/2006	713.09	738.54	NA	718.90	719.33	696.81	702.59	707.86	745.12	718.06	714.12	717.94		NA	721.40	722.90	712.36	NA

Notes:

1. NM = not measured for particular date
2. NA = not analyzed as a part of O&M activities
3. Blank cells indicate that no leachate was recorded at particular location
4. Due to new wellhead configuration, leachate level can not be measured in EW-8.
5. Leachate elevations measured on 1-12-99, collected during hostile weather conditions, were omitted from this table due to suspect inaccuracies caused by temperature related equipment failure.
6. Leachate elevations were not measured at several SVs or DVs on 1-12-99, 12-20-00, 1-24-01, 1-17-02, 1-30-03, 1-28-04, 1-19-05, 1-10-07, 3-10-08, and 1-21-09 due to frozen flush mount vaults.
7. Leachate elevations were not measured at SV-4 and DV-9 on 3-12-07 due to flooded vaults.
8. Leachate elevations were not measured at several vaults on 1-9-08 and 3-9-09 due to flooded vaults.

Table 1
Leachate Levels
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
3/8/2006	721.05	744.02	NA	720.25	721.93	698.17	713.86	709.52	744.78	721.91	713.95	715.77	720.54	NA	724.42	723.23	715.80	NA
5/8/2006	721.94	743.60	NA	718.19	719.18	700.37	712.90	713.83	744.24	720.78	713.74	723.26	725.6	NA	724.64	722.48	714.67	NA
7/12/2006	721.43	739.82	NA	717.87	718.52	697.09	707.82	708.59	740.40	720.72	713.76	722.50	719.46	NA	722.70	720.13	716.08	NA
9/5/2006	720.15	739.24	NA	719.38	718.25	698.59	705.79	708.78	738.75	718.70	713.77	730.07	726.98	NA	729.43	720.49	716.66	NA
11/8/2006	730.07	750.13	NA	720.95	719.69	700.51	708.17	712.57	740.89	720.44	714.17	735.56	721.50	NA	723.33	726.90	722.22	NA
1/10/2007	NM	748.80	NA	720.91	720.33	NM	NM	NM	NM	721.58	715.61	731.06	720.95	NA	729.72	729.84	720.63	NA
3/12/2007	726.71	743.94	NA	723.47	719.58	703.34	721.75	712.71	741.46	716.60	713.96	736.61	728.40	NA	723.08	721.74	714.01	NA
5/9/2007	721.42	748.85	NA	719.78	718.95	703.03	711.25	717.62	741.91	721.81	713.71	727.38	729.93	NA	724.02	720.94	716.16	NA
7/11/2007	721.16	738.89	NA	719.13	717.64	700.36	707.59	713.27	741.93	722.17		713.51	728.60	NA		713.62	714.17	NA
9/12/2007	721.45	742.60	NA	718.28	718.10	699.27	708.05	713.77	741.52	NM	712.74	716.47	729.11	NA	722.27	722.43	715.55	NA
11/14/2007	719.09	741.62	NA	719.55	718.70	698.17	706.07	708.53	744.25	722.81	713.86	737.09	729.57	NA	724.63	732.74	716.33	NA
1/9/2008	725.60	NM	NA	723.43	715.87	698.51	713.35	724.65	751.63	722.81	713.88	734.57	729.45	NA	732.61	716.86	715.43	NA
3/10/2008	NM	749.88	NA	721.51	718.61	NM	723.52	NM	NM	722.92	713.93	737.03	735.08	NA	730.95	718.03	716.29	NA
5/14/2008	723.44	752.17	NA	722.21	721.86	702.98	723.12	724.64	742.77	724.39	713.90	734.49	729.60	NA	723.82	722.63	715.82	NA
7/9/2008	722.84	744.08	NA	719.66	720.44	700.00	709.13	NM	742.92	724.75	715.24	737.83	733.02	NA	729.77	723.13	715.19	NA
9/10/2008	721.58	744.91	NA	718.98	720.26	699.05	706.54	NM	742.74	722.18	713.77	726.00	731.75	NA	728.82	723.45	715.07	NA
11/19/2008	723.56	746.45	NA	722.28	722.76	700.54	708.17	715.65	745.16	723.17	713.85	734.02	728.20	NA	731.44	723.93	716.87	NA
1/21/2009	721.45	NM	NA	NM	NM	NM	NM	716.32	NM	NM	713.85	736.88	724.97	NA	731.69	724.35	719.93	NA
3/9/2009	729.95	NM	NA	724.20	727.47	NM	724.17	727.93	749.43	723.36	NM	733.47	729.29	NA	743.08	724.48	718.81	NA

- Notes:**
- 1. NM = not measured for particular date
 - 2. NA = not analyzed as a part of O&M activities
 - 3. Blank cells indicate that no leachate was recorded at particular location
 - 4. Due to new wellhead configuration, leachate level can not be measured in EW-8.
 - 5. Leachate elevations measured on 1-12-99, collected during hostile weather conditions, were omitted from this table due to suspect inaccuracies caused by temperature related equipment failure.
 - 6. Leachate elevations were not measured at several SVs or DVs on 1-12-99, 12-20-00, 1-24-01, 1-17-02, 1-30-03, 1-28-04, 1-19-05, 1-10-07, 3-10-08, and 1-21-09 due to frozen flush mount vaults.
 - 7. Leachate elevations were not measured at SV-4 and DV-9 on 3-12-07 due to flooded vaults.
 - 8. Leachate elevations were not measured at several vaults on 1-9-08 and 3-9-09 due to flooded vaults.

Table 1A
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-10	SV-11
STARTUP	734.78	719.36	726.07	723.67	718.46	735.31	731.99	710.92	711.03	693.55	738.47
YEAR 1	734.53	718.68	725.07	721.47	718.40	732.23	730.24	711.91	711.58	694.53	738.96
YEAR 2	732.65	718.11	722.77	721.04	715.11	727.78	728.87	711.59	711.05	692.80	737.51
YEAR 3	734.15	718.81	722.07	723.61	716.61	729.11	728.92	712.56	711.64	694.07	738.73
YEAR 4	734.52	719.76	-	725.47	717.44	729.07	729.32	713.69	713.00	-	739.32
YEAR 5	734.14	721.05	-	723.94	715.69	728.95	731.08	714.12	712.54	-	739.69
YEAR 6	733.79	721.65	-	725.88	714.60	727.99	730.83	713.90	712.18	-	739.65
YEAR 7	734.06	721.74	-	724.10	715.88	727.64	730.73	715.19	712.50	-	739.10
YEAR 8	733.80	723.64	-	724.28	715.35	726.76	730.52	715.05	712.55	-	739.01
YEAR 9	734.27	722.70	-	728.80	719.30	729.73	729.73	716.51	712.70	-	738.97
YEAR 10	733.33	-	-	727.42	716.85	729.63	730.19	717.34	715.73	-	738.98
YEAR 11	734.07	-	-	727.39	720.75	730.28	731.06	718.11	714.00	-	737.82
N	12	10	4	12	12	12	12	12	12	4	12
MEAN	734.01	720.55	723.99	724.76	717.04	729.54	730.29	714.24	712.54	693.73	738.85
STANDARD DEVIATION	0.58	1.87	1.88	2.35	1.88	2.31	0.94	2.30	1.31	0.74	0.65

Notes:

1. All elevations are in feet above mean sea level.
 2. Average elevations were calculated using all measurements collected at particular location during the given time period.
- "-" = leachate not recorded at particular location during the given time period.

Table 1A
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9	DV-10
STARTUP	761.87	-	750.69	735.45	701.95	695.96	730.80	748.16	723.85	718.98	737.41
YEAR 1	761.72	-	745.58	734.59	703.51	696.12	722.05	747.71	723.71	719.21	735.91
YEAR 2	759.65	-	742.03	731.83	701.74	695.41	718.94	745.63	720.83	715.73	729.88
YEAR 3	760.94	-	742.40	733.10	701.66	699.80	717.01	740.59	724.26	717.68	722.14
YEAR 4	760.13	-	-	733.16	702.88	699.74	717.01	-	724.78	717.68	723.44
YEAR 5	761.28	-	-	732.86	701.75	698.65	717.97	-	722.62	715.86	723.28
YEAR 6	761.43	-	-	734.72	700.91	707.85	742.49	-	723.04	714.96	720.42
YEAR 7	761.44	-	-	733.44	702.55	708.35	-	746.44	722.29	713.46	724.05
YEAR 8	761.44	-	-	732.89	700.86	707.75	-	746.52	722.24	715.80	718.55
YEAR 9	761.43	-	-	733.71	703.12	707.98	-	747.60	725.26	718.56	724.06
YEAR 10	761.45	-	-	733.53	702.29	712.78	743.06	747.61	723.84	715.67	721.74
YEAR 11	761.50	-	-	733.17	702.23	709.50	742.94	746.48	725.68	717.82	723.80
N	12	0	4	12	12	12	9	9	12	12	12
MEAN	761.19	-	745.18	733.54	702.12	703.32	728.03	746.30	723.53	716.78	725.39
STANDARD DEVIATION	0.65	-	4.01	0.97	0.82	6.25	11.87	2.29	1.40	1.79	5.92

Notes:

1. All elevations are in feet above mean sea level.
 2. Average elevations were calculated using all measurements collected at particular location during the given time period.
- "-" = leachate not recorded at particular location during the given time period.

Table 1A
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2
STARTUP	749.95	701.90	712.65	717.94	699.97	701.83	708.37	728.54	716.04	711.89	719.27
YEAR 1	745.79	-	713.23	717.88	700.47	702.01	706.86	733.09	714.65	712.48	719.33
YEAR 2	742.18	-	712.01	717.19	698.34	701.99	706.42	740.81	714.51	711.44	719.00
YEAR 3	741.63	-	713.45	716.08	698.99	707.74	707.09	741.97	714.96	712.36	718.58
YEAR 4	743.23	-	715.19	717.82	700.47	712.51	708.37	742.98	721.17	713.36	717.31
YEAR 5	745.12	-	715.65	718.48	699.07	712.79	708.65	741.86	716.82	713.25	716.49
YEAR 6	746.24	-	717.38	718.55	699.50	716.04	706.66	743.06	721.79	712.59	715.91
YEAR 7	747.14	-	718.88	718.20	699.54	713.71	707.46	744.71	718.15	713.65	716.63
YEAR 8	741.79	-	719.35	719.85	698.22	707.63	708.07	745.39	720.68	713.70	717.57
YEAR 9	744.26	-	720.13	719.26	699.98	711.29	711.30	741.15	719.80	714.17	729.84
YEAR 10	744.37	-	720.28	717.98	699.87	711.64	715.57	744.25	722.50	713.62	727.68
YEAR 11	746.90	-	721.47	722.56	700.64	714.23	721.14	744.60	723.57	714.12	733.78
N	12	1	12	12	12	12	12	12	12	12	12
MEAN	744.88	701.90	716.64	718.48	699.59	709.45	709.66	741.03	718.72	713.05	720.95
STANDARD DEVIATION	2.49	-	3.36	1.59	0.80	5.12	4.42	5.08	3.27	0.88	5.97

Notes:

1. All elevations are in feet above mean sea level.
 2. Average elevations were calculated using all measurements collected at particular location during the given time period.
- "-" = leachate not recorded at particular location during the given time period.

Table 1A
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
STARTUP	730.27	713.38	751.92	717.68	722.59	750.15
YEAR 1	728.43	-	736.38	717.73	718.41	743.73
YEAR 2	730.01	713.01	725.92	714.72	713.72	-
YEAR 3	726.38	-	723.47	713.71	712.73	-
YEAR 4	726.39	-	726.34	718.39	712.43	-
YEAR 5	724.63	-	726.18	720.93	712.33	-
YEAR 6	719.94	-	728.12	722.71	712.67	-
YEAR 7	724.35	-	725.31	721.32	712.66	-
YEAR 8	719.01	-	722.43	722.76	713.39	-
YEAR 9	723.82	-	725.48	723.60	717.38	-
YEAR 10	730.29	-	726.90	720.77	715.66	-
YEAR 11	729.47	-	731.44	723.66	716.95	-
N	12	2	12	12	12	2
MEAN	726.08	713.20	729.16	719.83	715.08	746.94
STANDARD DEVIATION	3.88	0.26	8.06	3.37	3.21	4.54

Notes:

1. All elevations are in feet above mean sea level.
 2. Average elevations were calculated using all measurements collected at particular location during the given time period.
- "-" = leachate not recorded at particular location during the given time period.

Table 2
Leachate Disposal - Daily Basis
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	EW1 (gallons)	EW1A (gallons)	EW2 (gallons)	EW3 (gallons)	EW4 (gallons)	EW5 (gallons)	EW6 (gallons)	EW7 (gallons)	EW8 (gallons)	LS01 (gallons)	LS02 (gallons)	Extraction Wells (gallons)	Lift Station (gallons)	Cumulative Totals		
														Total EW (gallons)	Total LS (gallons)	Total LCS (gallons)
5/9/2008	0	0	0	0	418	2,847	0	6,735	0	0	0	10,000	0	4,068,393	1,252,610	5,321,003
5/12/2008	163	167	170	176	308	3,416	38	5,562	0	0	0	10,000	0	4,078,393	1,252,610	5,331,003
5/14/2008	47	37	969	5,595	36	439	7	0	0	2,869	0	7,131	2,869	4,085,524	1,255,479	5,341,003
5/16/2008	40	71	1,738	3,756	132	921	6	1	1	3,334	0	6,666	3,334	4,092,189	1,258,814	5,351,003
5/19/2008	107	132	1,920	126	212	1,881	15	5,606	0	0	0	10,000	0	4,102,189	1,258,814	5,361,003
5/21/2008	242	269	1,396	310	137	2,280	0	3,866	0	0	0	8,500	0	4,110,689	1,258,814	5,369,503
5/23/2008	141	188	1,779	209	155	2,047	42	4,439	0	0	0	9,000	0	4,119,689	1,258,814	5,378,503
5/28/2008	163	199	1,955	171	252	1,854	733	4,671	0	0	0	10,000	0	4,129,689	1,258,814	5,388,503
5/30/2008	186	201	2,437	170	134	2,111	22	3,539	0	0	0	8,800	0	4,138,489	1,258,814	5,397,303
6/2/2008	249	273	2,001	264	216	2,525	29	4,443	0	0	0	10,000	0	4,148,489	1,258,814	5,407,303
6/4/2008	192	259	1,867	199	219	2,479	40	546	0	0	0	5,800	0	4,154,289	1,258,814	5,413,103
6/6/2008	141	136	1,983	164	252	1,887	117	4,319	0	0	0	9,000	0	4,163,289	1,258,814	5,422,103
6/9/2008	110	127	838	143	50	1,756	219	1,758	0	0	0	5,000	0	4,168,289	1,258,814	5,427,103
6/11/2008	104	121	213	58	25	282	6	271	0	8,419	0	1,081	8,419	4,169,370	1,267,233	5,436,603
6/13/2008	68	60	379	56	44	359	0	630	0	8,405	0	1,595	8,405	4,170,965	1,275,638	5,446,603
6/16/2008	66	60	375	60	51	408	9	518	0	8,452	0	1,548	8,452	4,172,513	1,284,090	5,456,603
6/20/2008	74	78	454	72	62	477	13	524	0	8,245	0	1,755	8,245	4,174,268	1,292,335	5,466,603
6/23/2008	58	65	640	64	80	668	14	608	0	7,804	0	2,196	7,804	4,176,464	1,300,139	5,476,603
6/25/2008	62	65	530	56	61	408	14	478	0	8,325	0	1,675	8,325	4,178,138	1,308,465	5,486,603
6/27/2008	47	43	358	30	40	468	24	619	0	8,171	0	1,629	8,171	4,179,767	1,316,636	5,496,403
7/1/2008	42	47	303	44	40	464	12	656	0	8,392	0	1,608	8,392	4,181,376	1,325,027	5,506,403
7/3/2008	36	49	410	557	54	524	48	847	0	7,474	0	2,526	7,474	4,183,901	1,332,502	5,516,403
7/7/2008	49	42	282	47	37	346	8	540	0	8,648	0	1,352	8,648	4,185,253	1,341,150	5,526,403
7/11/2008	47	24	397	6	54	364	7	97	35	4,969	0	1,031	4,969	4,186,285	1,346,118	5,532,403
7/14/2008	50	45	291	66	35	541	8	1,201	141	7,623	0	2,378	7,623	4,188,662	1,353,741	5,542,403
7/16/2008	18	36	264	21	37	347	5	533	11	3,729	0	1,271	3,729	4,189,933	1,357,470	5,547,403
7/21/2008	40	41	487	36	70	743	5	1,598	109	5,370	0	3,130	5,370	4,193,063	1,362,840	5,555,903
7/24/2008	15	14	150	13	43	387	5	777	17	2,129	0	1,421	2,129	4,194,484	1,364,969	5,559,453
7/31/2008	14	16	541	14	58	653	2	1,118	34	3,050	0	2,450	3,050	4,196,934	1,368,019	5,564,953
8/7/2008	19	16	443	20	66	751	0	792	51	3,742	0	2,158	3,742	4,199,092	1,371,761	5,570,853
8/14/2008	16	26	546	5	91	820	7	1,054	40	2,396	0	2,604	2,396	4,201,697	1,374,157	5,575,853
8/21/2008	9	12	303	10	54	418	2	826	23	1,342	0	1,658	1,342	4,203,355	1,375,498	5,578,853
9/4/2008	353	23	621	36	120	1,170	0	1,071	40	2,066	0	3,434	2,066	4,206,789	1,377,564	5,584,353
9/11/2008	78	59	371	494	84	714	0	642	43	1,315	0	2,485	1,315	4,209,274	1,378,879	5,588,153
9/16/2008	465	1	151	2,018	29	367	0	756	5,183	1,029	0	8,971	1,029	4,218,245	1,379,909	5,598,153
9/18/2008	304	0	350	2,675	99	317	0	278	1,000	4,978	0	5,022	4,978	4,223,267	1,384,886	5,608,153
9/25/2008	431	1	433	2,671	132	646	0	362	243	5,081	0	4,919	5,081	4,228,186	1,389,967	5,618,153
9/30/2008	23	19	447	3,059	117	826	0	317	152	5,041	0	4,959	5,041	4,233,145	1,395,008	5,628,153
10/2/2008	294	0	328	2,111	66	768	0	2	0	5,931	0	3,569	5,931	4,236,714	1,400,939	5,637,653
10/9/2008	180	68	205	1,309	43	496	10	1,129	0	6,558	0	3,442	6,558	4,240,157	1,407,496	5,647,653
10/16/2008	254	45	386	2,312	138	834	6	871	27	5,129	0	4,871	5,129	4,245,028	1,412,625	5,657,653

Table 2
Leachate Disposal - Daily Basis
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	EW1 (gallons)	EW1A (gallons)	EW2 (gallons)	EW3 (gallons)	EW4 (gallons)	EW5 (gallons)	EW6 (gallons)	EW7 (gallons)	EW8 (gallons)	LS01 (gallons)	LS02 (gallons)	Extraction Wells (gallons)	Lift Station (gallons)	Cumulative Totals		
														Total EW (gallons)	Total LS (gallons)	Total LCS (gallons)
10/21/2008	498	0	889	2,240	164	978	10	509	32	4,681	0	5,319	4,681	4,250,347	1,417,306	5,667,653
10/23/2008	210	60	307	1,115	45	679	0	1,309	36	6,240	0	3,760	6,240	4,254,107	1,423,546	5,677,653
10/31/2008	519	65	485	1,901	136	918	0	1,020	52	4,904	0	5,096	4,904	4,259,203	1,428,451	5,687,653
11/6/2008	451	198	477	1,992	153	968	0	1,074	31	4,655	0	5,345	4,655	4,264,548	1,433,106	5,697,653
11/13/2008	308	134	523	1,319	90	1,020	11	1,184	16	5,395	0	4,605	5,395	4,269,152	1,438,501	5,707,653
11/20/2008	314	145	597	1,549	100	1,000	17	1,257	155	4,866	0	5,134	4,866	4,274,287	1,443,367	5,717,653
11/26/2008	406	183	624	1,663	112	1,030	20	1,154	150	4,659	0	5,341	4,659	4,279,628	1,448,025	5,727,653
12/4/2008	373	0	668	1,626	113	1,303	0	1,415	0	4,502	0	5,498	4,502	4,285,126	1,452,528	5,737,653
12/11/2008	864	0	1,603	4,147	305	3,081	0	0	0	0	0	10,000	0	4,295,126	1,452,528	5,747,653
12/16/2008	433	30	688	1,639	125	1,234	0	1,633	0	4,218	0	5,782	4,218	4,300,908	1,456,746	5,757,653
12/18/2008	745	35	1,057	3,859	182	1,592	0	2,522	7	0	0	10,000	0	4,310,908	1,456,746	5,767,653
12/24/2008	885	166	730	4,321	62	1,295	0	1,430	100	11	0	8,989	11	4,319,897	1,456,756	5,776,653
12/31/2008	759	146	1,521	4,565	273	1,866	0	139	11	721	0	9,279	721	4,329,176	1,457,477	5,786,653
1/8/2009	766	166	1,341	5,291	173	1,425	0	625	163	50	0	9,950	50	4,339,127	1,457,527	5,796,653
1/15/2009	899	162	1,273	4,288	3	1,804	26	493	48	4	0	8,996	4	4,348,122	1,457,531	5,805,653
1/22/2009	425	50	869	2,266	2	869	12	484	23	0	0	5,000	0	4,353,122	1,457,531	5,810,653
1/29/2009	1,106	110	683	4,036	4	1,763	5	1,982	311	0	0	10,000	0	4,363,122	1,457,531	5,820,653
2/5/2009	678	138	1,090	1,922	4	877	15	457	21	0	0	5,200	0	4,368,322	1,457,531	5,825,853
2/12/2009	857	0	1,683	3,209	568	1,899	0	1,017	112	655	0	9,345	655	4,377,667	1,458,186	5,835,853
2/19/2009	773	191	1,115	2,880	308	465	21	1,353	0	2,894	0	7,106	2,894	4,384,773	1,461,080	5,845,853
2/26/2009	998	132	1,455	4,632	195	1,453	9	1,104	21	1	0	9,999	1	4,394,772	1,461,081	5,855,853
3/5/2009	768	4	1,063	3,745	133	1,276	14	1,458	23	15	0	8,485	15	4,403,257	1,461,096	5,864,353
3/12/2009	506	157	1,099	3,706	178	1,173	2	800	0	2,378	0	7,622	2,378	4,410,879	1,463,474	5,874,353
3/17/2009	410	201	1,226	4,106	174	995	17	1,046	0	1,825	0	8,175	1,825	4,419,054	1,465,299	5,884,353
3/19/2009	257	176	550	2,589	59	450	7	874	0	4,238	0	4,962	4,238	4,424,016	1,469,537	5,893,553
3/24/2009	431	79	746	2,809	93	604	0	913	0	4,326	0	5,674	4,326	4,429,690	1,473,863	5,903,553
3/26/2009	234	132	563	1,753	49	609	5	932	0	5,724	0	4,276	5,724	4,433,966	1,479,587	5,913,553
3/31/2009	458	76	729	2,081	114	536	4	721	0	2,782	0	4,718	2,782	4,438,684	1,482,369	5,921,053
4/2/2009	49	169	406	1,320	31	683	13	1,043	0	6,287	0	3,713	6,287	4,442,397	1,488,656	5,931,053
4/6/2009	68	118	779	2,246	104	614	2	1,047	0	5,022	0	4,978	5,022	4,447,375	1,493,678	5,941,053
4/8/2009	64	93	781	2,395	97	596	6	1,006	0	3,962	0	5,038	3,962	4,452,414	1,497,639	5,950,053
4/10/2009	73	95	518	1,651	53	590	11	1,115	15	5,877	0	4,123	5,877	4,456,537	1,503,516	5,960,053
4/13/2009	54	60	180	731	15	262	2	886	0	6,810	0	2,190	6,810	4,458,727	1,510,327	5,969,053
4/15/2009	0	0	601	1,689	58	395	0	952	0	6,305	0	3,695	6,305	4,462,422	1,516,631	5,979,053
4/17/2009	0	0	520	1,551	46	402	0	643	0	6,837	0	3,163	6,837	4,465,585	1,523,468	5,989,053
4/20/2009	0	0	455	1,222	33	109	0	535	0	6,647	0	2,353	6,647	4,467,938	1,530,115	5,998,053
4/22/2009	0	0	700	1,870	84	553	0	1,061	69	5,661	0	4,339	5,661	4,472,277	1,535,776	6,008,053
4/24/2009	0	0	521	1,395	51	409	0	659	0	6,465	0	3,035	6,465	4,475,312	1,542,241	6,017,553
4/27/2009	0	108	579	1,837	66	354	0	0	0	6,055	0	2,945	6,055	4,478,257	1,548,297	6,026,553
4/29/2009	43	1	588	1,772	65	555	0	0	0	6,977	0	3,023	6,977	4,481,280	1,555,273	6,036,553

Table 3
Leachate Disposal - Yearly Basis
Blackwell Landfill NPL Site, DuPage County, Illinois

Extraction Well	Leachate Removal from Individual Extraction Wells (gallons)													
	Startup Dec. 1997 - Feb. 1998	Year 1 March 1998 - April 1999	Year 2 May 1999 - April 2000	Year 3 May 2000 - April 2001	Year 4 May 2001 - April 2002	Year 5 May 2002 - April 2003	Year 6 May 2003 - April 2004	Year 7 May 2004 - April 2005	Year 8 May 2005 - April 2006	Year 9 May 2006 - April 2007	Year 10 May 2007 - April 2008	Year 11 May 2008 - April 2009	Cumulative Total	Yearly Average
EW-1	833	46,087	25,471	17,143	45,274	15,792	6,669	5,237	9,439	24,687	3,784	21,681	222,095	20,115
EW-1A	547	8,712	4,584	11,029	13,188	4,026	6,016	3,283	19,847	37,715	7,802	6,715	123,463	11,174
EW-2	914	33,996	40,400	56,970	52,608	18,724	19,915	24,888	16,718	28,422	33,460	61,992	389,007	35,281
EW-3	3,589	96,472	72,175	144,770	72,347	26,795	18,062	15,188	33,827	147,336	21,994	130,131	782,686	70,827
EW-4	881	3,024	4,526	11,533	2,985	4,014	12,470	11,077	7,475	11,210	8,075	8,973	86,245	7,760
EW-5	1,841	32,345	41,765	32,441	22,578	13,805	9,245	10,473	40,402	77,344	53,310	80,697	416,245	37,673
EW-6	1,608	34,474	14,266	14,331	5,632	3,161	4,358	695	29	3,695	2,031	1,703	85,982	7,670
EW-7	2,694	182,798	41,832	31,046	19,308	16,454	11,321	12,159	24,660	87,732	64,204	102,451	596,658	53,997
EW-8	2,678	183,340	94,186	147,455	143,203	133,632	220,738	303,163	232,709	208,433	100,815	8,545	1,778,898	161,474
EW Subtotal	15,585	621,248	339,205	466,718	377,122	236,403	308,793	386,164	385,105	626,574	295,475	422,887	4,481,280	405,972
LS-01	10,082	227,965	120,844	174,240	136,778	55,597	64,507	116,536	42,295	79,226	187,300	302,663	1,518,034	137,086
LS-02	10,941	26,298	0	0	0	0	0	0	0	0	0	0	37,239	2,391
LS Subtotal	21,023	254,264	120,844	174,240	136,778	55,597	64,507	116,536	42,295	79,226	187,300	302,663	1,555,273	139,477
Total	36,608	875,512	460,050	640,958	513,900	292,000	373,300	502,700	427,400	705,800	482,775	725,550	6,036,553	545,449
Precipitation (in.)¹	4.71	43.56	22.13	29.56	38.54	26.79	27.30	29.67	21.64	33.44	25.14	44.04	346.52	28.88
Total Gallons²	5,116,196	47,316,667	24,038,518	32,109,290	41,863,736	29,100,402	29,654,385	32,228,776	23,506,260	36,323,906	27,308,104	47,838,062	376,404,301	31,367,025

Notes:

1 = Total precipitation as recorded at the nearby DuPage County Airport

2 = Total gallons of precipitation calculated for the 40-acre Blackwell Landfill

Table 4
Cumulative Leachate Removal
(Sorted by Extracted Leachate Volume)
Blackwell Landfill NPL Site, DuPage County, Illinois

Extraction Wells/ Lift Stations	Total Volume Removed ⁽¹⁾ (gallons)	Average Extraction Rate ⁽²⁾ (gallons/month)	Contribution to Total (%)	Cumulative Volume Extracted (gallons)	Cumulative Contribution to Total (%)
EW-8	1,778,898	13,255	29.5	1,778,898	29.5
LS-01	1,518,034	11,253	25.1	3,296,931	54.6
EW-3	782,686	5,814	13.0	4,079,618	67.6
EW-7	596,658	4,433	9.9	4,676,276	77.5
EW-5	416,245	3,093	6.9	5,092,521	84.4
EW-2	389,007	2,896	6.4	5,481,529	90.8
EW-1	222,095	1,651	3.7	5,703,624	94.5
EW-1A	123,463	917	2.0	5,827,087	96.5
EW-4	86,245	637	1.4	5,913,332	98.0
EW-6	85,982	630	1.4	5,999,314	99.4
LS-02	37,239	196	.6	6,036,553	100.0
TOTAL	6,036,553	44,776	100.0	6,036,553	100.0

Notes:

1. Cumulative leachate volumes are from December 1, 1997 to April 30, 2009.
2. During routine pumping.

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01 Sep-91	LLDV5-01 Sep-91	Average Sep-91	BW-LCS-01 Dec-97	BW-LCS-02 Jan-98	BW-LCS-03 Feb-98	BW-LCS-04 Jun-98	BW-LCS-05 Sep-98	BW-LCS-06 Dec-98	BW-LCS-07 Mar-99	BW-LCS-08 Jul-99	BW-LCS-09 Dec-99	BW-LCS-10 Apr-00	BW-LCS-11 Jul-00	BW-LCS-12 Oct-00
Conventionals																
BOD ₅	mg/L	NA	NA	NA	11.000	10.000	1.530	14.200	29.100	5.940	13.700	3.980	10.700	311	871	4.760
COD	mg/L	NA	NA	NA	15.000	13.300	1.990	19.900	22.900	7.920	22.600	4.440	16.000	969	1,450	5.900
Nitrogen Ammonia	mg/L	464	395	429.5	427	339	58.1	770	1.100	210	739	180	590	140	66.8	380
Oil & Grease	mg/L	NA	NA	NA	526	153	<1	486	<1	31	3	2	9	3	<1	226
pH @ 25 °C	units	NA	NA	NA	6.69	6.61	6.44	6.72	6.72	6.42	6.71	7.03	6.85	7.02	6.94	7.53
Phenol	mg/L	NA	NA	NA	0.44	1.76	0.43	3.09	5.7	1.46	3.2	0.7	2.5	0.28	0.18	0.83
Total Dissolved Solids	mg/L	12.700	5.690	9.195	13.200	11.400	2.550	18.260	21.000	6.850	23.300	4.920	16.900	3.290	3.490	6.780
Total Suspended Solids	mg/L	NA	NA	NA	417	476	224	2.040	215	264	1160	200	827	185	48	206
Cyanide	mg/L	ND	0.007	0.0035	NA	0.014	<0.005	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005
Fluoride	mg/L	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	1330	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	3.18	0.06	1.62	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	0.08	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	725	41	383	NA	NA	192	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics																
Arsenic	mg/L	0.045	0.045	0.045	0.008	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	NA	<0.04	<0.002	0.004	0.004
Barium	mg/L	0.612	0.32	0.466	0.273	0.304	0.178	2.02	0.918	0.192	0.578	NA	0.625	0.377	0.218	0.073
Boron	mg/L	NA	NA	NA	4.8	3.87	1.24	6.32	7.15	2.26	7.71	NA	6.29	1.65	1.07	3.15
Cadmium	mg/L	0.026	0.007	0.0165	0.082	0.051	0.008	0.18	0.049	0.037	0.062	NA	0.092	0.006	0.002	<0.001
Chromium	mg/L	0.022	0.144	0.083	0.008	0.01	0.871	0.07	0.022	0.005	0.018	NA	0.021	0.007	0.004	0.009
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA	<0.05	<0.05
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	0.871	NA	NA	NA	NA	NA	NA	NA	NA	<0.05
Copper	mg/L	ND	0.069	0.0345	<0.01	<0.01	0.025	<0.001	<0.002	<0.01	<0.002	NA	0.297	<0.001	<0.001	0.076
Iron	mg/L	2.120	182	1.151	550	542	89.6	792	552	451	1.010	NA	1.300	68.7	3.3	49
Lead	mg/L	0.03	0.396	0.213	0.1	0.066	0.014	0.534	0.138	0.05	0.109	NA	NA	0.027	0.009	0.003
Manganese	mg/L	30.6	2.86	16.73	8.5	8.72	1.82	13.4	8.71	8.7	14.6	NA	13.8	1.45	2.13	2.15
Mercury	mg/L	ND	0.002	0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.001	NA	<0.001	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.233	0.186	0.2095	0.131	0.109	0.352	0.218	0.167	0.085	0.214	NA	0.167	0.036	0.023	0.062
Selenium	mg/L	NA	NA	NA	<0.02	<0.02	<0.02	<0.002	<0.004	<0.02	<0.004	NA	<0.04	<0.002	<0.002	<0.002
Silver	mg/L	0.03	ND	0.015	<0.001	<0.001	<0.01	<0.001	<0.002	<0.001	<0.002	NA	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	60.5	1.48	30.99	19.9	18.5	2.6	11.2	3.09	16.5	23.8	NA	28.8	2.93	0.5	0.454
Volatile Organic Compounds																
Acetone	ug/L	10.000	49	5.025	2.420	NA	442	NA	12,600	NA	7,710	NA	6,300	NA	NA	NA
Acrolein	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	<100	NA
Acrylonitrile	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	<100	NA
Benzene	ug/L	160	27	93.5	26.1 J	NA	25.5	NA	36.2	NA	32	NA	18.01	8.4	5.3	NA
Bromodichloromethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Bromoform	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Bromomethane	ug/L	NA	NA	NA	<100	NA	<10	NA	<10	NA	<10	NA	<10	<10	<10	NA
2-Butanone	ug/L	NA	NA	NA	7,410	NA	854	NA	24,300	NA	17,000	NA	22,100	NA	NA	NA
Carbon disulfide	ug/L	ND	ND	ND	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Carbon tetrachloride	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Chlorobenzene	ug/L	ND	ND	ND	10.6 J	NA	124	NA	20.4	NA	11	NA	<5	25.2	<5	NA
Chlorodibromomethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Chloroethane	ug/L	NA	NA	NA	<100	NA	<10	NA	23.4	NA	12	NA	<10	<10	<10	NA
2-Chloroethylvinyl ether	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	<10	NA
Chloroform	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Chloromethane	ug/L	NA	NA	NA	<100	NA	<10	NA	<10	NA	<10	NA	<10	<10	<10	NA

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01	LLDV5-01	Average	BW-LCS-01	BW-LCS-02	BW-LCS-03	BW-LCS-04	BW-LCS-05	BW-LCS-06	BW-LCS-07	BW-LCS-08	BW-LCS-09	BW-LCS-10	BW-LCS-11	BW-LCS-12
		Sep-91	Sep-91	Sep-91	Dec-97	Jan-98	Feb-98	Jun-98	Sep-98	Dec-98	Mar-99	Jul-99	Dec-99	Apr-00	Jul-00	Oct-00
Volatile Organic Compounds (Continued)																
1,1-Dichloroethane	ug/L	180	3	91.5	<50	NA	10.3	NA	9.2	NA	9	NA	<5	<5	<5	NA
1,2-Dichloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
1,1-Dichlorethene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
cis-1,2-Dichloroethene	ug/L	NA	NA	NA	116	NA	99.2	NA	43	NA	88	NA	45.2	<5	<5	NA
trans-1,2-Dichloroethene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
1,2-Dichloroethene (total)	ug/L	280	7	143.5	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA
1,2-Dichloropropane	ug/L	ND	ND	ND	<50	NA	14.2	NA	<5	NA	<5	NA	<5	<5	<5	NA
cis-1,3-Dichloropropene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
trans-1,3-Dichloropropene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Ethyl Benzene	ug/L	84	130	107	38.4 J	NA	27.6	NA	38.5	NA	48	NA	42.8	7.2	<5	NA
2-Hexanone	ug/L	NA	NA	NA	<100	NA	<10	NA	29.6	NA	24	NA	<10	NA	NA	NA
4-Methyl-2-pentanone	ug/L	1,100	28	564	144	NA	61.4	NA	544	NA	472	NA	353	NA	NA	NA
Methylene chloride	ug/L	NA	NA	NA	<50	NA	41.5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Styrene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	NA	NA	NA
1,1,2,2-Tetrachloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Tetrachloroethene	ug/L	ND	ND	ND	<50	NA	<5	NA	<5	NA	5	NA	17.8	<5	<5	NA
Toluene	ug/L	1,800	49	924.5	197	NA	117	NA	119	NA	192	NA	113	30.2	11.7	NA
1,1,1-Trichloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
1,1,2-Trichloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Trichloroethene	ug/L	170	ND	85	23.7 J	NA	11.1	NA	6.2	NA	19	NA	15.4	<5	<5	NA
Vinyl Acetate	ug/L	NA	NA	NA	<100	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA
Vinyl Chloride	ug/L	ND	ND	ND	<100	NA	<10	NA	<10	NA	<10	NA	<10	<10	<10	NA
Xylenes (total)	ug/L	260	400	330	175	NA	95.8	NA	186	NA	<5	NA	228	NA	NA	NA
Semivolatile Organic Compounds																
Acenaphthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Acenaphthylene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Anthracene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzidine	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[a]anthracene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[b]fluoranthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[k]fluoranthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[g,h,i]perylene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[a]pyrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzoic Acid	ug/L	NA	NA	NA	<250	NA	<50	NA	3,990	NA	15,400	NA	3,130	NA	NA	NA
Benzyl Alcohol	ug/L	NA	NA	NA	<100	NA	<20	NA	<400	NA	<600	NA	<200	NA	NA	NA
bis(2-chloroethoxy)methane	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
bis(2-chloroethyl) ether	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
bis(2-chloroisopropyl) ether	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
bis(2-ethylhexyl) phthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Bromophenyl-phenylether	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Butylbenzylphthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Chloroaniline	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	ND	34	17	<100	NA	<20	NA	<400	NA	<600	NA	<200	<20	<20	NA
2-Chloronaphthalene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
2-Chlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Chlorophenyl-phenylether	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Chrysene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01	LLDV5-01	Average	BW-LCS-01	BW-LCS-02	BW-LCS-03	BW-LCS-04	BW-LCS-05	BW-LCS-06	BW-LCS-07	BW-LCS-08	BW-LCS-09	BW-LCS-10	BW-LCS-11	BW-LCS-12
		Sep-91	Sep-91	Sep-91	Dec-97	Jan-98	Feb-98	Jun-98	Sep-98	Dec-98	Mar-99	Jul-99	Dec-99	Dec-00	Oct-00	
Semivolatile Organic Compounds (Continued)																
Dibenzofuran	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	.05	NA	
1,2-Dichlorobenzene	ug/L	ND	4	2	<50	NA	<10	NA	<200	NA	<300	NA	<100	.05	NA	
1,3-Dichlorobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.05	NA	
1,4-Dichlorobenzene	ug/L	ND	940	470	<50	NA	<10	NA	<200	NA	<300	NA	<100	.05	NA	
3,3-Dichlorobenzidine	ug/L	NA	NA	NA	<100	NA	<20	NA	<400	NA	<600	NA	<200	.05	NA	
2,4-Dichlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.5	NA	
Diethylphthalate	ug/L	ND	33	16.5	<50	NA	147	NA	<200	NA	<300	NA	<100	.5	NA	
2,4-Dimethylphenol	ug/L	ND	10	5	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
Dimethylphthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
Di-n-butylphthalate	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
4,6-Dinitro-2-methylphenol	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	.10	NA	
2,4-Dinitrophenol	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	.05	NA	
2,4-Dinitrotoluene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
2,6-Dinitrotoluene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
1,2-Diphenylhydrazine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.10	NA	
Di-n-octylphthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
Fluoranthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.10	NA	
Fluorene	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	.05	NA	
Hexachlorobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.05	NA	
Hexachlorobutadiene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	.50	NA	
Hexachlorocyclopentadiene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	1.0	NA	
Hexachloroethane	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
Ideno[1,2,3-cd]pyrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
Isophorone	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100			
2-Methylnaphthalene	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100			
2-Methylphenol	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100			
3&4-Methylphenol	ug/L	17,000	5	8,503	229	NA	275	NA	10,100	NA	7,640	NA	6,870			
Naphthalene	ug/L	ND	960	480	<50	NA	<10	NA	866	NA	<300	NA	<100			
2-Nitroaniline	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500			
3-Nitroaniline	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500			
4-Nitroaniline	ug/L	NA	NA	NA	<100	NA	<20	NA	<400	NA	<600	NA	<200			
Nitrobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
2-Nitrophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
4-Nitrophenol	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500			
N-Nitrosodimethylamine	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100			
N-Nitroso-di-n-propylamine	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
n-Nitrosodiphenylamine	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
Pentachlorophenol	ug/L	ND	ND	ND	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500			
Phenanthrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
Phenol	ug/L	ND	ND	ND	124	NA	111	NA	1,620	NA	1,900	NA	1,280			
Pyrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
Pyridine	ug/L	NA	NA	NA	<250	NA	NA	NA	NA	NA	NA	NA	<100			
1,2,4-Trichlorobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
2,4,5-Trichlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			
2,4,6-Trichlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100			

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Conventionals																		
BOD ₅	mg/L	502	448	888	1,460	303	3,040	1,050	595	38	6,880	204	244	270	4,110	354	204	185
COD	mg/L	1,080	730	1,590	1,900	1,060	4,080	3,800	1,030	865	7,360	415	559	2,350	5,500	603	384	776
Nitrogen Ammonia	mg/L	88	61	190	140	480	280	190	260	570	220	89	210	420	210	120	98	360
Oil & Grease	mg/L	6	4	<1	3	<1	20	3	38	<5	125	2	3	11	23	3	<1	8
pH @ 25 °C	units	6.87	7.61	7.72	6.92	7.4	7.01	7.31	7.5	7.95	6.85	7	7.56	7.28	6.65	7.36	7.19	7.42
Phenol	mg/L	0.13	0.13	0.37	0.54	0.18	0.96	1.25	0.35	0.05	1.61	0.18	0.1	0.6	1.04	0.12	0.11	0.32
Total Dissolved Solids	mg/L	2,440	2,460	4,101	3,970	6,130	6,820	6,000	4,770	7,580	7,330	2,410	3,380	6,680	5,440	2,630	2,210	5,700
Total Suspended Solids	mg/L	102	35	145	548	22	843	103	54	16	243	29	46	258	158	39	57	45
Cyanide	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	0.006	<0.005
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics																		
Arsenic	mg/L	<0.002	<0.02	<0.002	<0.002	0.003	0.003	0.011	0.006	0.009	0.008	<0.002	<0.002	0.008	<0.002	<0.002	0.005	0.003
Barium	mg/L	0.262	0.069	0.045	0.144	0.161	0.306	0.547	0.265	0.056	0.338	0.396	0.127	0.256	0.104	0.272	0.335	0.219
Boron	mg/L	1.06	0.52	0.06	1.34	2.9	1.4	2.91	2.88	3.86	2.4	1.38	1.53	3.25	0.76	1.09	1.54	3.21
Cadmium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	mg/L	0.004	0.003	0.008	0.006	0.016	0.012	0.015	0.017	0.016	0.008	0.003	0.007	0.016	0.005	0.005	0.005	0.012
Chromium, Hexavalent	mg/L	<0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.047	0.004	0.004	0.008	0.036
Iron	mg/L	45.5	11.3	4.59	82.4	20.5	121	172	49.2	5.11	290	7.98	9.2	82.5	83.1	16.3	34.6	16.6
Lead	mg/L	0.004	<0.002	0.003	<0.002	0.008	0.008	0.012	0.006	0.006	0.01	0.002	<0.002	0.018	0.003	<0.002	<0.002	0.003
Manganese	mg/L	1.66	0.594	0.062	2.18	0.0131	1.18	3.57	0.371	0.018	6.12	0.441	0.215	0.654	2.54	0.624	0.622	0.17
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.013	0.012	0.004	0.029	0.063	0.03	0.04	0.054	0.088	0.038	0.017	0.034	0.068	0.016	0.022	0.017	0.062
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.001
Zinc	mg/L	0.364	0.19	0.035	0.144	0.248	0.812	1.32	0.65	0.086	1.52	0.048	0.087	0.444	0.458	0.183	0.143	0.196
Volatile Organic Compounds																		
Acetone	ug/L	NA	NA	428	NA	177	NA	903	NA	78	NA	106	NA	870	NA	NA	NA	NA
Acrolein	ug/L	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	NA	<100
Acrylonitrile	ug/L	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	NA	<100
Benzene	ug/L	8.6	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	5.5	NA	<5.0	NA	<5.0
Bromodichloromethane	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Bromoform	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Bromomethane	ug/L	<10	NA	<10	NA	<10	NA	<5	NA	<5	NA	<1.0	NA	<5.0	NA	<10.0	NA	<10.0
2-Butanone	ug/L	NA	NA	815	NA	180	NA	1,910	NA	<10	NA	216	NA	2,020	NA	NA	NA	NA
Carbon disulfide	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Carbon tetrachloride	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Chlorobenzene	ug/L	25.8	NA	<5	NA	9.3	NA	<5	NA	<5	NA	5.7	NA	43.0	NA	16.8	NA	<5.0
Chlorodibromomethane	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Chloroethane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	13.4	NA	12.1	NA	<10.0
2-Chloroethylvinyl ether	ug/L	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10.0	NA	<10.0
Chloroform	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Chloromethane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Volatile Organic Compounds (Continued)																		
1,1-Dichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1-Dichlorethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
cis-1,2-Dichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
trans-1,2-Dichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloroethene (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
cis-1,3-Dichloropropene	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
trans-1,3-Dichloropropene	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Ethyl Benzene	ug/L	7.6	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
2-Hexanone	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	<10.0	NA	NA	NA	NA
4-Methyl-2-pentanone	ug/L	NA	NA	26.4	NA	13.5	NA	50	NA	<10	NA	10.0	NA	80.8	NA	NA	NA	NA
Methylene chloride	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Styrene	ug/L	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Tetrachloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Toluene	ug/L	24.6	NA	<5	NA	<5	NA	8.1	NA	<5	NA	<5.0	NA	16.9	NA	6.3	NA	<5.0
1,1,1-Trichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1,2-Trichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Trichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Vinyl Acetate	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	<10.0	NA	NA	NA	NA
Vinyl Chloride	ug/L	<10	NA	<2	NA	<2	NA	<2	NA	<2	NA	<2.0	NA	<2.0	NA	<10.0	NA	<10.0
Xylenes (total)	ug/L	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	30.4	NA	NA	NA	NA
Semivolatile Organic Compounds																		
Acenaphthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Acenaphthylene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Anthracene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzidine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[a]anthracene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[b]fluoranthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[k]fluoranthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[g,h,i]perylene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[a]pyrene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzoic Acid	ug/L	NA	NA	<50	NA	346	NA	730	NA	<50	NA	93	NA	1,410	NA	NA	NA	NA
Benzyl Alcohol	ug/L	NA	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	NA	NA	NA
bis(2-chloroethoxy)methane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
bis(2-chloroethyl) ether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
bis(2-chloroisopropyl) ether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
bis(2-ethylhexyl) phthalate	ug/L	<10	NA	<6	NA	<10	NA	<10	NA	<5	NA	<5	NA	<5	NA	<10	NA	<10
4-Bromophenyl-phenylether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Butylbenzylphthalate	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4-Chloroaniline	ug/L	NA	NA	<20	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	<20	NA	<10	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20
2-Chloronaphthalene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Chlorophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4-Chlorophenyl-phenylether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Chrysene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Semivolatile Organic Compounds (Continued)																		
Dibenzofuran	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
1,2-Dichlorobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
1,3-Dichlorobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
1,4-Dichlorobenzene	ug/L	17	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
3,3-Dichlorobenzidine	ug/L	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20
2,4-Dichlorophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Diethylphthalate	ug/L	<10	NA	55	NA	17	NA	<10	NA	<10	NA	<10	NA	31	NA	14	NA	16
2,4-Dimethylphenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Dimethylphthalate	ug/L	<10	NA	55	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Di-n-butylphthalate	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4,6-Dinitro-2-methylphenol	ug/L	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
2,4-Dinitrophenol	ug/L	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
2,4-Dinitrotoluene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2,6-Dinitrotoluene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
1,2-Diphenylhydrazine	ug/L	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	<10
Di-n-octylphthalate	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Fluoranthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Fluorene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachlorobenzene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachlorobutadiene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachlorocyclopentadiene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachloroethane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<5	NA	<5	NA	<5	NA	<10	NA	<10
Idenof [1,2,3-cd]pyrene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Isophorone	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Methylnaphthalene	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
2-Methylphenol	ug/L	<50	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<50	NA	<50
3&4-Methylphenol	ug/L	168	NA	101	NA	224	NA	410	NA	<10	NA	89	NA	1,100	NA	226	NA	429
Naphthalene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Nitroaniline	ug/L	NA	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	NA	NA	NA
3-Nitroaniline	ug/L	NA	NA	<50	NA	<50	NA	<50	NA	<50	NA	<51	NA	<50	NA	NA	NA	NA
4-Nitroaniline	ug/L	NA	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	NA	NA	NA
Nitrobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Nitrophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4-Nitrophenol	ug/L	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
N-Nitrosodimethylamine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
N-Nitroso-di-n-propylamine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
n-Nitrosodiphenylamine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Pentachlorophenol	ug/L	<50	NA	NA	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
Phenanthrene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Phenol	ug/L	25	NA	100	NA	23	NA	118	NA	<10	NA	<10	NA	202	NA	33	NA	75
Pyrene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Pyridine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2,4,5-Trichlorophenol	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Pesticides																		
Aldrin	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
alpha-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
beta-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
delta-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Lindane (gamma-BHC)	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
alpha-Chlordane	ug/L	<0.5	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
gamma-Chlordane	ug/L	<0.5	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
4,4'-DDD	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
4,4'-DDE	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
4,4'-DDT	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
Dieldrin	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
Endosulfan I	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Endosulfan II	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endosulfan sulfate	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin aldehyde	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin ketone	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Heptachlor	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Heptachlor epoxide	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Methoxychlor	ug/L	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
Toxaphene	ug/L	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0

Notes:
¹The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.
NA: No analysis.
ND: Not detected.
J: Data flag indicates an estimated value.
B = Data flag indicates analyte detected in associated method blank.
P = Data flag indicates chemical preservation pH adjusted in lab.

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08
Conventionals														
BOD ₅	mg/L	274	246	23	89	186	1,860	4,000	5,800	858	4	51	2,220	352
COD	mg/L	485	570	542	910	272	2,990	22,300	8,520	1,480	39	316	1,210	1,020
Nitrogen Ammonia	mg/L	69.2	96.4	160	449	98	140	256	310	240	23	140	250	360
Oil & Grease	mg/L	3	12	<1	3	<1	28	290	125	5	<1	3	3	4
pH @ 25 °C	units	7.57	7.25	7.31	8.34	7.37	7.11	7.28	7.28	7.52	6.86	7.98	7.38	7.61
Phenol	mg/L	0.14	0.16	0.06	0.05	<0.05	0.68	<0.5	2.01	0.38	0.01	0.05	0.23	0.28
Total Dissolved Solids	mg/L	1,940	2,490	2,670	6,660	2,090	4,180	2,500	8,610	4,320	1,230	1,230	5,510	5,220
Total Suspended Solids	mg/L	21	74	64	171	106	106	14,000	39	74	48	192	133	45
Cyanide	mg/L	<0.005	<0.005	0.013	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics														
Arsenic	mg/L	<0.002	0.004	<0.002	0.008	<0.002	0.006	0.020	<0.002	0.006	<0.002	<0.002	0.006	0.012
Barium	mg/L	0.076	0.398	0.288	0.107	0.132	0.318	0.160	0.189	0.202	0.093	0.098	0.198	0.171
Boron	mg/L	0.95	1.11	1.32	3.81	0.74	1.37	0.08	2.23	2.28	0.26	1.6	2.54	2.55
Cadmium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Chromium	mg/L	0.002	0.006	0.003	0.015	<0.001	0.005	0.001	0.005	0.009	<0.001	0.004	0.006	0.013
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	0.007	0.031	0.026	0.089	0.004	0.007	0.018	0.006	0.008	<0.001	<0.001	0.012	0.003
Iron	mg/L	11.1	25.5	18.3	8.0	32.3	42.0	294	25.7	27.3	13.1	4.19	84.6	17.8
Lead	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.028	<0.002	<0.002	<0.002	<0.002	<0.002	0.004
Manganese	mg/L	0.55	0.674	0.248	0.047	0.548	2.20	1.10	4.03	0.873	0.343	0.041	1.940	0.250
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.014	0.020	0.018	0.086	0.012	0.020	0.034	0.038	0.045	0.002	0.019	0.040	0.063
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	0.054	0.234	0.109	0.235	0.087	0.451	7.63	0.149	0.162	0.013	0.018	0.228	0.111
Volatile Organic Compounds														
Acetone	ug/L	NA	346	NA	<100	NA	1,100	NA	2,970	NA	<100	NA	1,180	NA
Acrolein	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Bromodichloromethane	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Bromoform	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Bromomethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
2-Butanone	ug/L	NA	586	NA	19.3	NA	2,410	NA	6,390	NA	<10.0	NA	2,540	NA
Carbon disulfide	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Carbon tetrachloride	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Chlorobenzene	ug/L	NA	<5.0	NA	<5.0	NA	9.9	NA	10.5	NA	<5.0	NA	<5.0	NA
Chlorodibromomethane	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Chloroethane	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA
2-Chloroethylvinyl ether	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Chloromethane	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30 Mar-05	BW-LCS-31 Jun-05	BW-LCS-32 Sep-05	BW-LCS-33 Dec-05	BW-LCS-34 Mar-06	BW-LCS-35 Jun-06	BW-LCS-36 Aug-06	BW-LCS-37 Nov-06	BW-LCS-38 Feb-07	BW-LCS-39 May-07	BW-LCS-40 Aug-07	BW-LCS-41 Nov-07	BW-LCS-42 Feb-08
Volatile Organic Compounds (Continued)														
1,1-Dichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
1,2-Dichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
1,1-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
cis-1,2-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
trans-1,2-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
1,2-Dichloroethene (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
cis-1,3-Dichloropropene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
trans-1,3-Dichloropropene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Ethyl Benzene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
2-Hexanone	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	30.6	NA	<10.0	NA	<10.0	NA
4-Methyl-2-pentanone	ug/L	NA	16.6	NA	<10.0	NA	40.9	NA	111	NA	<10.0	NA	89.1	NA
Methylene chloride	ug/L	NA	<5.0	NA	<5.0	NA	5.6	NA	8.0	NA	<5.0	NA	7.0	NA
Styrene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
1,1,2,2-Tetrachloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Tetrachloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Toluene	ug/L	NA	<5.0	NA	<5.0	NA	5.1	NA	10.1	NA	<5.0	NA	11.0	NA
1,1,1-Trichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
1,1,2-Trichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Trichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
Vinyl Acetate	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA
Vinyl Chloride	ug/L	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA
Xylenes (total)	ug/L	NA	<5.0	NA	<5.0	NA	19.9	NA	9.4	NA	<5.0	NA	8.4	NA
Semivolatile Organic Compounds														
Acenaphthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Acenaphthylene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Anthracene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzidine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzo[a]anthracene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzo[b]fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzo[k]fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzo[g,h,i]perylene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzo[a]pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Benzoic Acid	ug/L	NA	221	NA	<50	NA	1,580	NA	3,580	NA	<50	NA	<50	NA
Benzyl Alcohol	ug/L	NA	<20	NA	<20	NA	<20	NA	<40	NA	<20	NA	<20	NA
bis(2-chloroethoxy)methane	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
bis(2-chloroethyl) ether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
bis(2-chloroisopropyl) ether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
bis(2-ethylhexyl) phthalate	ug/L	NA	<5	NA	<5	NA	<5	NA	<10	NA	<5	NA	59 B	NA
4-Bromophenyl-phenylether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Butylbenzylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
4-Chloroaniline	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
4-Chloro-3-methylphenol	ug/L	NA	<20	NA	<20	NA	<20	NA	<40	NA	<20	NA	<20	NA
2-Chloronaphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2-Chlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
4-Chlorophenyl-phenylether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Chrysene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08
Semivolatile Organic Compounds (Continued)														
Dibenzofuran	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
1,2-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
1,3-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
1,4-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
3,3-Dichlorobenzidine	ug/L	NA	<20	NA	<20	NA	<20	NA	<40	NA	<20	NA	<20	NA
2,4-Dichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Diethylphthalate	ug/L	NA	15	NA	<10	NA	37	NA	79	NA	<10	NA	28	NA
2,4-Dimethylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Dimethylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Di-n-butylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
4,6-Dinitro-2-methylphenol	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA
2,4-Dinitrophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2,4-Dinitrotoluene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2,6-Dinitrotoluene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
1,2-Diphenylhydrazine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Fluorene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Hexachlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Hexachlorobutadiene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Hexachlorocyclopentadiene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Hexachloroethane	ug/L	NA	<5	NA	<5	NA	<5	NA	<10	NA	<5	NA	<5	NA
Idenol[1,2,3-cd]pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Isophorone	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2-Methylnaphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2-Methylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	13	NA
3&4-Methylphenol	ug/L	NA	86	NA	<10	NA	1,250	NA	1,780	NA	<10	NA	1,070	NA
Naphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	226	NA	<10	NA	<10	NA
2-Nitroaniline	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA
3-Nitroaniline	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA
4-Nitroaniline	ug/L	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA
Nitrobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2-Nitrophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
4-Nitrophenol	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA
N-Nitrosodimethylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
N-Nitroso-di-n-propylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
n-Nitrosodiphenylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Pentachlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Phenanthrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Phenol	ug/L	NA	26	NA	<10	NA	160	NA	305	NA	<10	NA	172	NA
Pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
Pyridine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2,4,5-Trichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA
2,4,6-Trichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08
Pesticides														
Aldrin	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
alpha-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
beta-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
delta-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
Lindane (gamma-BHC)	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
alpha-Chlordane	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA
gamma-Chlordane	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA
4,4'-DDD	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
4,4'-DDE	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
4,4'-DDT	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Dieldrin	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Endosulfan I	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
Endosulfan II	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Endosulfan sulfate	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Endrin	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Endrin aldehyde	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Endrin ketone	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA
Heptachlor	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
Heptachlor epoxide	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA
Methoxychlor	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA
Toxaphene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA

Notes:
¹The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.
NA: No analysis.
ND: Not detected.
J: Data flag indicates an estimated value.
B = Data flag indicates analyte detected in associated method blank.
P = Data flag indicates chemical preservation pH adjusted in lab.

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-43	BW-LCS-44	BW-LCS-45	BW-LCS-46	Minimum ¹	Maximum ¹
		May-08	Aug-08	Nov-08	Jan-09		
Conventionals							
BOD ₅	mg/L	29	70	708	1,960	4	29,100
COD	mg/L	110	744	1,180	2,320	39	22,900
Nitrogen Ammonia	mg/L	510	334	117	211	23	1100
Oil & Grease	mg/L	14	6	3	9 P	<1	526
pH @ 25 °C	units	7.04	7.34	7.10	7.10	6.42	8.34
Phenol	mg/L	0.07	0.09	0.23	2.21	0.01	5.7
Total Dissolved Solids	mg/L	1,210	5,020	3,150	4,950	1,210	23,300
Total Suspended Solids	mg/L	87	30	99	158	16	14,000
Cyanide	mg/L	<0.005	0.006	<0.005	<0.005	<0.005	0.014
Fluoride	mg/L	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	1330	1330
Nitrate+Nitrite	mg/L	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	0.08	0.08
Sulfate	mg/L	NA	NA	NA	NA	140	192
Inorganics							
Arsenic	mg/L	0.006	0.008	<0.002	<0.002	<0.002	0.02
Barium	mg/L	0.228	0.401	0.545	0.357	0.045	2.02
Boron	mg/L	0.44	2.31	1.45	2.12	0.06	7.71
Cadmium	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	0.18
Chromium	mg/L	0.001	0.011	0.004	0.008	<0.001	0.871
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	NA
Chromium, Trivalent	mg/L	NA	NA	NA	NA	0.871	0.871
Copper	mg/L	0.002	0.001	<0.001	<0.001	<0.001	0.297
Iron	mg/L	19.1	6.89	71.1	93.6	3.3	1300
Lead	mg/L	0.002	<0.002	<0.002	0.004	<0.002	0.534
Manganese	mg/L	0.301	0.185	1.04	1.52	0.0131	14.6
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Nickel	mg/L	0.006	0.052	0.019	0.038	0.002	0.352
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	0.004
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Zinc	mg/L	0.516	0.127	0.186	0.662	0.013	28.8
Volatile Organic Compounds							
Acetone	ug/L	<100	NA	590	NA	78	12,600
Acrolein	ug/L	NA	NA	NA	NA	NA	NA
Acrylonitrile	ug/L	NA	NA	NA	NA	NA	NA
Benzene	ug/L	<5.0	NA	8.5	NA	<5.0	36.2
Bromodichloromethane	ug/L	<1.0	NA	<1.0	NA	<1.0	<50
Bromoform	ug/L	<1.0	NA	<1.0	NA	<1.0	<50
Bromomethane	ug/L	<5.0	NA	<5.0	NA	<1.0	<100
2-Butanone	ug/L	<10.0	NA	936	NA	<10.0	24,300
Carbon disulfide	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
Carbon tetrachloride	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
Chlorobenzene	ug/L	8.4	NA	21.2	NA	<5.0	124
Chlorodibromomethane	ug/L	<1.0	NA	<1.0	NA	<1.0	<50
Chloroethane	ug/L	<10.0	NA	<10.0	NA	<10	23.4
2-Chloroethylvinyl ether	ug/L	NA	NA	NA	NA	<10	<10
Chloroform	ug/L	<1.0	NA	<1.0	NA	<1.0	<50
Chloromethane	ug/L	<10.0	NA	<10.0	NA	<10	<100

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-43 May-08	BW-LCS-44 Aug-08	BW-LCS-45 Nov-08	BW-LCS-46 Jan-09	Minimum ¹	Maximum ¹
Volatile Organic Compounds (Continued)							
1,1-Dichloroethane	ug/L	<5.0	NA	<5.0	NA	<5.0	10.3
1,2-Dichloroethane	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
1,1-Dichloroethene	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
cis-1,2-Dichloroethene	ug/L	<5.0	NA	<5.0	NA	<5.0	116
trans-1,2-Dichloroethene	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
1,2-Dichloroethene (total)	ug/L	NA	NA	NA	NA	<5.0	<5.0
1,2-Dichloropropane	ug/L	<5.0	NA	<5.0	NA	<5.0	14.2
cis-1,3-Dichloropropene	ug/L	<1.0	NA	<1.0	NA	<1.0	<50
trans-1,3-Dichloropropene	ug/L	<1.0	NA	<1.0	NA	<1.0	<50
Ethyl Benzene	ug/L	<5.0	NA	6.8	NA	<5.0	48
2-Hexanone	ug/L	<10.0	NA	<10.0	NA	<10	30.6
4-Methyl-2-pentanone	ug/L	<10.0	NA	29.6	NA	<10	544
Methylene chloride	ug/L	<5.0	NA	<5.0	NA	<5.0	41.5
Styrene	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
1,1,2,2-Tetrachloroethane	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
Tetrachloroethene	ug/L	<5.0	NA	<5.0	NA	<5.0	17.8
Toluene	ug/L	<5.0	NA	9.8	NA	<5.0	197
1,1,1-Trichloroethane	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
1,1,2-Trichloroethane	ug/L	<5.0	NA	<5.0	NA	<5.0	<50
Trichloroethene	ug/L	<5.0	NA	<5.0	NA	<5.0	19
Vinyl Acetate	ug/L	<10.0	NA	<10.0	NA	<10	<100
Vinyl Chloride	ug/L	<2.0	NA	<2.0	NA	<2.0	<100
Xylenes (total)	ug/L	8.1	NA	21.1	NA	<5.0	228
Semivolatile Organic Compounds							
Acenaphthene	ug/L	<10	NA	<100	NA	<10	<300
Acenaphthylene	ug/L	<10	NA	<100	NA	<10	<300
Anthracene	ug/L	<10	NA	<100	NA	<10	<300
Benzidine	ug/L	<10	NA	<100	NA	<10	<300
Benzo[a]anthracene	ug/L	<10	NA	<100	NA	<10	<300
Benzo[b]fluoranthene	ug/L	<10	NA	<100	NA	<10	<300
Benzo[k]fluoranthene	ug/L	<10	NA	<100	NA	<10	<300
Benzo[g,h,i]perylene	ug/L	<10	NA	<100	NA	<10	<300
Benzo[a]pyrene	ug/L	<10	NA	<100	NA	<10	<300
Benzoic Acid	ug/L	<50	NA	266	NA	<50	15,400
Benzyl Alcohol	ug/L	<20	NA	<200	NA	<20	<600
bis(2-chloroethoxy)methane	ug/L	<10	NA	<100	NA	<10	<300
bis(2-chloroethyl) ether	ug/L	<10	NA	<100	NA	<10	<300
bis(2-chloroisopropyl) ether	ug/L	<10	NA	<100	NA	<10	<300
bis(2-ethylhexyl) phthalate	ug/L	<5	NA	<50	NA	<5.0	<300
4-Bromophenyl-phenylether	ug/L	<10	NA	<100	NA	<10	<300
Butylbenzylphthalate	ug/L	<10	NA	<100	NA	<10	<300
4-Chloroaniline	ug/L	<10	NA	<100	NA	<10	<300
4-Chloro-3-methylphenol	ug/L	<20	NA	<200	NA	<10	<600
2-Chloronaphthalene	ug/L	<10	NA	<100	NA	<10	<300
2-Chlorophenol	ug/L	<10	NA	<100	NA	<10	<300
4-Chlorophenyl-phenylether	ug/L	<10	NA	<100	NA	<10	<300
Chrysene	ug/L	<10	NA	<100	NA	<10	<300

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-43 May-08	BW-LCS-44 Aug-08	BW-LCS-45 Nov-08	BW-LCS-46 Jan-09	Minimum ¹	Maximum ¹
Semivolatile Organic Compounds (Continued)							
Dibenzofuran	ug/L	<10	NA	<100	NA	<10	<300
1,2-Dichlorobenzene	ug/L	<10	NA	<100	NA	<10	<300
1,3-Dichlorobenzene	ug/L	<10	NA	<100	NA	<10	<300
1,4-Dichlorobenzene	ug/L	<10	NA	115	NA	<10	115
3,3-Dichlorobenzidine	ug/L	<20	NA	<200	NA	<20	<600
2,4-Dichlorophenol	ug/L	<10	NA	<100	NA	<10	<300
Diethylphthalate	ug/L	<10	NA	238	NA	<10	238
2,4-Dimethylphenol	ug/L	<10	NA	<100	NA	<10	<300
Dimethylphthalate	ug/L	<10	NA	<100	NA	<10	55
Di-n-butylphthalate	ug/L	<10	NA	<100	NA	<10	<300
4,6-Dinitro-2-methylphenol	ug/L	<50	NA	<500	NA	<50	<1,500
2,4-Dinitrophenol	ug/L	<10	NA	<100	NA	<50	<1,500
2,4-Dinitrotoluene	ug/L	<10	NA	<100	NA	<10	<300
2,6-Dinitrotoluene	ug/L	<10	NA	<100	NA	<10	<300
1,2-Diphenylhydrazine	ug/L	NA	NA	NA	NA	<10	<10
Di-n-octylphthalate	ug/L	<10	NA	<100	NA	<10	<300
Fluoranthene	ug/L	<10	NA	<100	NA	<10	<300
Fluorene	ug/L	<10	NA	<100	NA	<10	<300
Hexachlorobenzene	ug/L	<10	NA	<100	NA	<10	<300
Hexachlorobutadiene	ug/L	<10	NA	<100	NA	<10	<300
Hexachlorocyclopentadiene	ug/L	<10	NA	<100	NA	<10	<300
Hexachloroethane	ug/L	<5	NA	<50	NA	<5	<300
Idenof[1,2,3-cd]pyrene	ug/L	<10	NA	<100	NA	<10	<300
Isophorone	ug/L	<10	NA	<100	NA	<10	<300
2-Methylnaphthalene	ug/L	<10	NA	<100	NA	<10	<300
2-Methylphenol	ug/L	<10	NA	<100	NA	<10	<300
3&4-Methylphenol	ug/L	<10	NA	386	NA	<10	10,100
Naphthalene	ug/L	<10	NA	<100	NA	<10	866
2-Nitroaniline	ug/L	<50	NA	<500	NA	<50	<1,500
3-Nitroaniline	ug/L	<50	NA	<500	NA	<50	<1,500
4-Nitroaniline	ug/L	<20	NA	<200	NA	<20	<600
Nitrobenzene	ug/L	<10	NA	<100	NA	<10	<300
2-Nitrophenol	ug/L	<10	NA	<100	NA	<10	<300
4-Nitrophenol	ug/L	<50	NA	<500	NA	<50	<1,500
N-Nitrosodimethylamine	ug/L	<10	NA	<100	NA	<10	<300
N-Nitroso-di-n-propylamine	ug/L	<10	NA	<100	NA	<10	<300
n-Nitrosodiphenylamine	ug/L	<10	NA	<100	NA	<10	<300
Pentachlorophenol	ug/L	<10	NA	<100	NA	<50	<1,500
Phenanthrene	ug/L	<10	NA	<100	NA	<10	<300
Phenol	ug/L	<10	NA	<100	NA	<10	1,900
Pyrene	ug/L	<10	NA	<100	NA	<10	<300
Pyridine	ug/L	NA	NA	NA	NA	<100	<250
1,2,4-Trichlorobenzene	ug/L	<10	NA	<100	NA	<10	<300
2,4,5-Trichlorophenol	ug/L	<10	NA	<100	NA	<10	<300
2,4,6-Trichlorophenol	ug/L	<10	NA	<100	NA	<10	<300

Table 5
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-43	BW-LCS-44	BW-LCS-45	BW-LCS-46	Minimum ¹	Maximum ¹
		May-08	Aug-08	Nov-08	Jan-09		
Pesticides							
Aldrin	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
alpha-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
beta-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
delta-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
Lindane (gamma-BHC)	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
alpha-Chlordane	ug/L	<0.50	NA	<0.50	NA	<0.50	<0.5
gamma-Chlordane	ug/L	<0.50	NA	<0.50	NA	<0.50	<0.5
4,4'-DDD	ug/L	<0.10	NA	<0.10	NA	<0.10	<1.10
4,4'-DDE	ug/L	<0.10	NA	<0.10	NA	<0.10	<1.10
4,4'-DDT	ug/L	<0.10	NA	<0.10	NA	<0.10	<1.10
Dieldrin	ug/L	<0.10	NA	<0.10	NA	<0.10	<1.10
Endosulfan I	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
Endosulfan II	ug/L	<0.10	NA	<0.10	NA	<0.10	<1
Endosulfan sulfate	ug/L	<0.10	NA	<0.10	NA	<0.10	<1
Endrin	ug/L	<0.10	NA	<0.10	NA	<0.10	<1
Endrin aldehyde	ug/L	<0.10	NA	<0.10	NA	<0.10	<1
Endrin ketone	ug/L	<0.10	NA	<0.10	NA	<0.10	<1
Heptachlor	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
Heptachlor epoxide	ug/L	<0.05	NA	<0.05	NA	<0.05	<0.5
Methoxychlor	ug/L	<0.50	NA	<0.50	NA	<0.50	<5
Toxaphene	ug/L	<1.0	NA	<1.0	NA	<1.0	<10

Notes:

¹The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.

NA: No analysis.

ND: Not detected.

J: Data flag indicates an estimated value.

B = Data flag indicates analyte detected in associated method blank.

P = Data flag indicates chemical preservation pH adjusted in lab.

Table 6
Landfill Gas Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Sample Identification	Sample Collection Date	Atmospheric Pressure (in. Hg)	ASTM D1945/1946			U.S. EPA Modified Method 25C	
			% of CO ₂ (%-v/v)	% of O ₂ (%-v/v)	% of N ₂ (%-v/v)	Methane ppm-c	Total Non-Methane Organic Compounds, as Methane ppm-c
FPD-LFGSTACK-01	September 15, 1998	29.97	33	0.51	1.90	550,000	1,400
BW-LFGSTACK-02	September 23, 1998	30.23	36	0.51	2.00	570,000	400
BW-LFGSTACK-03	October 27, 1998	30.14	35	0.53	2.00	570,000	900
BW-LFGSTACK-04	October 28, 1998	29.99	35	0.53	2.00	570,000	710
BW-LFGSTACK-05	November 24, 1998	30.14	39	0.47	2.30	570,000	39
BW-LFGSTACK-06	November 25, 1998	29.76	38	0.96	3.40	560,000	22
BW-LFGSTACK-07	March 24, 1999	30.20	34	0.93	5.00	580,000	1,200
BW-LFGSTACK-08	March 31, 1999	29.43	34	1.10	4.60	580,000	1,200
BW-LFGSTACK-09A	August 13, 1999	29.70	34	0.98	2.70	650,000	1,100
BW-LFGSTACK-10A	August 18, 1999	30.08	33	0.76	2.30	650,000	1,200
BW-LFGSTACK-11A	January 4, 2000	29.92	37	0.71	ND	690,000	1,700
BW-LFGSTACK-12A	January 14, 2000	30.72	35	2.80	8.30	630,000	1,500
BW-LFGSTACK-13A	June 19, 2000	30.11	34	0.20	8.30	640,000	1,900
BW-LFGSTACK-14A	June 28, 2000	30.02	31	0.60	12.00	590,000	830
BW-LFGSTACK-15A	October 16, 2000	30.18	34	0.73	7.20	640,000	1,900
BW-LFGSTACK-16A	January 4, 2001	29.97	33	0.60	7.20	600,000	1,300
BW-LFGSTACK-17A	April 2, 2001	30.17	33	0.21	8.10	590,000	1,300
BW-LFGSTACK-18A	June 29, 2001	30.06	32	0.19	5.90	620,000	1,000
BW-LFGSTACK-19A	October 4, 2001	30.02	34	0.22	3.80	620,000	1,700
BW-LFGSTACK-20A	December 12, 2001	30.02	33	0.35	6.20	600,000	1,700
BW-LFGSTACK-21A	April 3, 2002	30.29	32	ND	12.00	570,000	1,400
BW-LFGSTACK-22A	June 27, 2002	29.83	33	0.18	12.00	590,000	1,500
BW-LFGSTACK-23A	September 26, 2002	29.86	30	ND	9.00	570,000	1,400
BW-LFGSTACK-24A	January 7, 2003	29.98	30	1.80	18.00	510,000	960
BW-LFGSTACK-25A	April 11, 2003	29.95	31	2.50	13.00	520,000	1,000
BW-LFGSTACK-26A	June 26, 2003	29.88	30	1.50	12.00	550,000	960
BW-LFGSTACK-27A	September 26, 2003	29.74	24	5.70	26.00	510,000	1,200
BW-LFGSTACK-28A	December 29, 2003	29.90	29	14.00	2.50	520,000	990
BW-LFGSTACK-29A	March 5, 2004	29.40	29	2.00	10.00	570,000	1,100
BW-LFGSTACK-30A	June 23, 2004	29.94	28	3.30	14.00	530,000	1,200
BW-LFGSTACK-31A	September 1, 2004	30.22	31	1.00	8.40	600,000	2,100
BW-LFGSTACK-32A	December 10, 2004	29.59	28	3.30	17.00	510,000	1,600
BW-LFGSTACK-33A	March 9, 2005	30.04	20	8.00	33.00	390,000	790
BW-LFGSTACK-34A	June 30, 2005	29.82	27	3.50	20.00	500,000	1,000
BW-LFGSTACK-35A	September 14, 2005	29.92	23	6.80	25.00	450,000	670
BW-LFGSTACK-36A	December 15, 2005	29.75	28	3.70	21.00	540,000	1,100
BW-LFGSTACK-37A	March 8, 2006	29.56	33	0.92	12.00	570,000	1,200
BW-LFGSTACK-38A	June 29, 2006	30.13	0.046	22.00	78.00	2.1	< 1.0
BW-LFGSTACK-39A	August 18, 2006	29.89	1.2	21.00	74.00	22,000	< 1.0
BW-LFGSTACK-940A	November 8, 2006	29.70	33	0.74	8.20	580,000	244
BW-LFGSTACK-41A	February 22, 2007	30.11	0.76	22.00	77.00	14,000	< 1.0

Table 6
Landfill Gas Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Sample Identification	Sample Collection Date	Atmospheric Pressure (in. Hg)	ASTM D1945/1946			U.S. EPA Modified Method 25C	
			% of CO ₂ (%-v/v)	% of O ₂ (%-v/v)	% of N ₂ (%-v/v)	Methane ppm-c	Total Non-Methane Organic Compounds, as Methane ppm-c
BW-LFGSTACK-42A	May 30, 2007	30.06	31	1.00	11.00	570.000	16.3
BW-LFGSTACK-43A	August 14, 2007	30.02	32	0.30	11.00	570.000	235.1
BW-LFGSTACK-44A	November 14, 2007	29.75	34	0.42	8.60	570.000	392.2
BW-LFGSTACK-45A	February 13, 2008	30.01	33	0.32	6.70	600.000	229.6
BW-LFGSTACK-46A	May 14, 2008	29.84	1.6	20.00	75.00	31.000	60.0
BW-LFGSTACK-47A	September 10, 2008	30.23	30	1.50	12.00	560.000	666.9
BW-LFGSTACK-48A	November 19, 2008	30.05	32	0.71	10.00	570.000	236.9
BW-LFGSTACK-49A	January 21, 2009	29.99	30	1.60	12.00	560.000	793.9
Averages	-	29.96	29	3.48	15.49	524,837	1,001

Notes:

in. Hg: Inches mercury.

%-v/v: Percent by volume.

ppm-c: Parts per million - carbon

ND: Not detected

Table 6A
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - May 2008
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day) ⁻¹	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	16	16	4.09E-08	1.69E-06	18.414	0.00003	NA	NA	5.0E-11	1.2E-10			
Benzene	1.2	1.2	4.13E-09	1.70E-07	18.414	0.00000	2.73E-02	8.57E-03	5.1E-12	1.2E-11	1.4E-13	1.4E-09	I, I
Benzyl Chloride ⁽⁴⁾	<0.68	0.34	1.90E-09	7.82E-08	18.414	0.00000	NA	NA	2.3E-12	5.4E-12			
Bromodichloromethane	<0.68	0.34	2.45E-09	1.01E-07	18.414	0.00000	NA	NA	3.0E-12	7.0E-12			
Bromoform	<0.68	0.34	3.78E-09	1.56E-07	18.414	0.00000	3.85E-03	NA	4.6E-12	1.1E-11	1.8E-14		I
Bromomethane	<0.68	0.34	1.42E-09	5.86E-08	18.414	0.00000	NA	1.43E-03	1.7E-12	4.1E-12		2.8E-09	I
2-Butanone (MEK)	2.3	2.3	7.30E-09	3.01E-07	18.414	0.00001	NA	1.43E+00	8.9E-12	2.1E-11		1.5E-11	I
Carbon Disulfide	<0.68	0.34	1.14E-09	4.70E-08	18.414	0.00000	NA	2.00E-01	1.4E-12	3.3E-12		1.6E-11	I
Carbon Tetrachloride	<0.68	0.34	2.30E-09	9.50E-08	18.414	0.00000	5.25E-02	NA	2.8E-12	6.6E-12	1.5E-13		I
Chlorobenzene	<0.68	0.34	1.69E-09	6.95E-08	18.414	0.00000	NA	5.71E-03	2.1E-12	4.8E-12		8.4E-10	H
Chloroethane	27	27	7.67E-08	3.16E-06	18.414	0.00006	NA	2.86E+00	9.4E-11	2.2E-10		7.7E-11	I
Chloroform	<0.68	0.34	1.79E-09	7.37E-08	18.414	0.00000	8.05E-02	NA	2.2E-12	5.1E-12	1.8E-13		I
Chloromethane	<2.7	1.35	3.00E-09	1.24E-07	18.414	0.00000	6.30E-03	2.57E-02	3.7E-12	8.6E-12	2.3E-14	3.3E-10	H, I
Dibromochloromethane	<0.68	0.34	3.12E-09	1.29E-07	18.414	0.00000	NA	NA	3.8E-12	8.9E-12			
1,2-Dichlorobenzene	<0.68	0.34	2.20E-09	9.08E-08	18.414	0.00000	NA	5.71E-02	2.7E-12	6.3E-12		1.1E-10	H
1,3-Dichlorobenzene	<0.68	0.34	2.20E-09	9.08E-08	18.414	0.00000	NA	NA	2.7E-12	6.3E-12			
1,4-Dichlorobenzene	<0.68	0.34	2.20E-09	9.08E-08	18.414	0.00000	NA	2.29E-01	2.7E-12	6.3E-12		2.7E-11	I
1,1-Dichloroethane	0.66	0.66	2.88E-09	1.19E-07	18.414	0.00000	NA	1.43E-01	3.5E-12	8.2E-12		5.7E-11	H
1,2-Dichloroethane	<0.68	0.34	1.48E-09	6.11E-08	18.414	0.00000	9.10E-02	NA	1.8E-12	4.2E-12	1.7E-13		I
1,1-Dichloroethene	0.49	0.49	2.09E-09	8.63E-08	18.414	0.00000	NA	5.71E-02	2.6E-12	6.0E-12		1.0E-10	I
cis-1,2-Dichloroethene	2.1	2.1	8.96E-09	3.70E-07	18.414	0.00001	NA	NA	1.1E-11	2.6E-11			
trans-1,2-Dichloroethene	1.4	1.4	5.98E-09	2.46E-07	18.414	0.00000	NA	NA	7.3E-12	1.7E-11			
1,2-Dichloropropane	<0.68	0.34	1.69E-09	6.98E-08	18.414	0.00000	NA	1.14E-03	2.1E-12	4.8E-12		4.2E-09	I
cis-1,3-Dichloropropene	<0.68	0.34	1.66E-09	6.85E-08	18.414	0.00000	1.40E-02	5.71E-03	2.0E-12	4.7E-12	2.8E-14	8.3E-10	I, I
trans-1,3-Dichloropropene	<0.68	0.34	1.66E-09	6.85E-08	18.414	0.00000	1.40E-02	5.71E-03	2.0E-12	4.7E-12	2.8E-14	8.3E-10	I, I
Ethyl Benzene	<0.68	0.34	1.59E-09	6.55E-08	18.414	0.00000	NA	2.86E-01	1.9E-12	4.5E-12		1.6E-11	I
Ethylene Dibromide ⁽⁵⁾	<0.68	0.34	2.81E-09	1.16E-07	18.414	0.00000	2.10E+00	2.60E-03	3.4E-12	8.0E-12	7.2E-12	3.1E-09	I, I
4-Ethyltoluene	<0.68	0.34	1.80E-09	7.42E-08	18.414	0.00000	NA	NA	2.2E-12	5.1E-12			
Freon 11 (C13FMe)	1.3	1.3	7.86E-09	3.24E-07	18.414	0.00001	NA	2.00E-01	9.6E-12	2.2E-11		1.1E-10	H
Freon 113	0.64	0.64	5.28E-09	2.18E-07	18.414	0.00000	NA	8.57E+00	6.46E-12	1.51E-11		1.76E-12	H
Freon 114 (C12F4Et)	21	21	1.58E-07	6.52E-06	18.414	0.00012	NA	NA	1.9E-10	4.5E-10			
Freon 12 (C12F2Me)	98	98	5.22E-07	2.15E-05	18.414	0.00040	NA	5.71E-02	6.4E-10	1.5E-09		2.6E-08	H
Hexachlorobutadiene	<2.7	1.35	1.55E-08	6.39E-07	18.414	0.00001	7.70E-02	NA	1.9E-11	4.4E-11	1.5E-12		I
2-Hexanone	<2.7	1.35	5.95E-09	2.46E-07	18.414	0.00000	NA	NA	7.3E-12	1.7E-11			

Table 6A
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - May 2008
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day) ⁻¹	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane ⁽⁶⁾	31,000,000	31,000,000	2.19E-02	9.03E-01	18.414	17	NA	NA	2.7E-05	6.3E-05			
4-Methyl-2-pentanone	<0.68	0.34	1.50E-09	6.18E-08	18.414	0.00000	NA	8.57E-01	1.8E-12	4.3E-12		5.0E-12	I
Methylene chloride	1.6	1.6	5.98E-09	2.47E-07	18.414	0.00000	NA	2.60E-02	7.3E-12	1.7E-11		6.6E-10	
Styrene	<0.68	0.34	1.56E-09	6.43E-08	18.414	0.00000	NA	2.86E-01	1.9E-12	4.5E-12		1.6E-11	I
1,1,2,2-Tetrachloroethane	<0.68	0.34	2.51E-09	1.04E-07	18.414	0.00000	2.03E-01	NA	3.1E-12	7.2E-12	6.2E-13		I
Tetrachloroethene	<0.68	0.34	2.48E-09	1.02E-07	18.414	0.00000	2.03E-03	1.71E-01	3.0E-12	7.1E-12	6.2E-15	4.1E-11	prov, prov
TNMOC ⁽⁷⁾	60,000	60,000	3.17E-05	1.31E-03	18.414	0.02409	NA	NA	3.9E-08	9.1E-08			prov
Toluene	0.73	0.73	2.96E-09	1.22E-07	18.414	0.00000	NA	1.14E-01	3.6E-12	8.5E-12		7.4E-11	I
1,2,4-Trichlorobenzene	<2.7	1.35	1.08E-08	4.45E-07	18.414	0.00001	NA	1.14E-03	1.3E-11	3.1E-11		2.7E-08	prov
1,1,1-Trichloroethane	<0.68	0.34	2.00E-09	8.24E-08	18.414	0.00000	NA	6.29E-01	2.4E-12	5.7E-12		9.1E-12	prov
1,1,2-Trichloroethane	<0.68	0.34	2.00E-09	8.24E-08	18.414	0.00000	5.60E-02	NA	2.4E-12	5.7E-12	1.4E-13		I
Trichloroethene	<0.68	0.34	1.97E-09	8.14E-08	18.414	0.00000	4.00E-01	1.14E-02	2.4E-12	5.6E-12	9.7E-13	4.9E-10	prov, prov
1,2,4-Trimethylbenzene	<0.68	0.34	1.80E-09	7.42E-08	18.414	0.00000	NA	1.71E-03	2.2E-12	5.1E-12		3.0E-09	prov
1,3,5-Trimethylbenzene	<0.68	0.34	1.80E-09	7.42E-08	18.414	0.00000	NA	1.71E-03	2.2E-12	5.1E-12		3.0E-09	prov
Vinyl chloride	220	220	6.05E-07	2.50E-05	18.414	0.00046	3.08E-02	2.86E-02	7.4E-10	1.7E-09	2.3E-11	6.0E-08	I, I
m,p-Xylene	0.56	0.56	2.62E-09	1.08E-07	18.414	0.00000	NA	2.86E-02	3.2E-12	7.5E-12		2.6E-10	I
o-Xylene	<0.68	0.34	1.59E-09	6.55E-08	18.414	0.00000	NA	2.86E-02	1.9E-12	4.5E-12		1.6E-10	I
Cumulative Risk -->											3.4E-11	1.4E-07	

Notes:
-¹ = Maximum concentration of BW-LFGSTACK-46A.
-² = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.
-³ = Maximum modeled concentration on the Blackwell Landfill
-⁴ = Benzyl Chloride is reported as alpha-Chlorotoluene in the Modified TO-15 Method
-⁵ =Ethylene Dibromide is reported as 1,2-Dibromomethane in the Modified TO-14 Method
-⁶ = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
-⁷ = Expressed on a carbon basis.
(A) = Adult
(L) = Lifetime
- = No listed screening value
H = HEAST Databasse (EPA's Health Effects Summary Table)
I = IRIS (EPA's Inategrated Risk Information System)
ppbv = Parts per billion by volume
prov = provisional value
C_{ppb, i}, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 6B
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - September 2008
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	700	700	1.79E-06	7.38E-05	18.414	0.00136	NA	NA	2.2E-09	5.1E-09			
Benzene	1500	1500	5.16E-06	2.13E-04	18.414	0.00392	2.73E-02	8.57E-03	6.3E-09	1.5E-08	1.7E-10	1.7E-06	I, I
Benzyl Chloride ⁽⁴⁾	<31	15.5	8.64E-08	3.56E-06	18.414	0.00007	NA	NA	1.1E-10	2.5E-10			
Bromodichloromethane	<31	15.5	1.12E-07	4.61E-06	18.414	0.00008	NA	NA	1.4E-10	3.2E-10			
Bromoform	<31	15.5	1.72E-07	7.11E-06	18.414	0.00013	3.85E-03	NA	2.1E-10	4.9E-10	8.1E-13		I
Bromomethane	<31	15.5	6.48E-08	2.67E-06	18.414	0.00005	NA	1.43E-03	7.9E-11	1.9E-10		1.3E-07	I
2-Butanone (MEK)	1000	1000	3.18E-06	1.31E-04	18.414	0.00241	NA	1.43E+00	3.9E-09	9.1E-09		6.3E-09	I
Carbon Disulfide	8.5	8.5	2.85E-08	1.18E-06	18.414	0.00002	NA	2.00E-01	3.5E-11	8.1E-11		4.1E-10	I
Carbon Tetrachloride	<31	15.5	1.05E-07	4.33E-06	18.414	0.00008	5.25E-02	NA	1.3E-10	3.0E-10	6.7E-12		I
Chlorobenzene	250	250	1.24E-06	5.11E-05	18.414	0.00094	NA	5.71E-03	1.5E-09	3.5E-09		6.2E-07	H
Chloroethane	660	660	1.87E-06	7.73E-05	18.414	0.00142	NA	2.86E+00	2.3E-09	5.4E-09		1.9E-09	I
Chloroform	<31	15.5	8.15E-08	3.36E-06	18.414	0.00006	8.05E-02	NA	1.0E-10	2.3E-10	8.0E-12		I
Chloromethane	<120	60	1.33E-07	5.50E-06	18.414	0.00010	6.30E-03	2.57E-02	1.6E-10	3.8E-10	1.0E-12	1.5E-08	H, I
Dibromochloromethane	<31	15.5	1.42E-07	5.86E-06	18.414	0.00011	NA	NA	1.7E-10	4.1E-10			
1,2-Dichlorobenzene	28	28	1.81E-07	7.47E-06	18.414	0.00014	NA	5.71E-02	2.2E-10	5.2E-10		9.1E-09	H
1,3-Dichlorobenzene	<31	15.5	1.00E-07	4.14E-06	18.414	0.00008	NA	NA	1.2E-10	2.9E-10			
1,4-Dichlorobenzene	1000	1000	6.47E-06	2.67E-04	18.414	0.00492	NA	2.29E-01	7.9E-09	1.8E-08		8.1E-08	I
1,1-Dichloroethane	150	150	6.54E-07	2.70E-05	18.414	0.00050	NA	1.43E-01	8.0E-10	1.9E-09		1.3E-08	H
1,2-Dichloroethane	<31	15.5	6.75E-08	2.79E-06	18.414	0.00005	9.10E-02	NA	8.3E-11	1.9E-10	7.5E-12		I
1,1-Dichloroethene	<31	15.5	6.62E-08	2.73E-06	18.414	0.00005	NA	5.71E-02	8.1E-11	1.9E-10		3.3E-09	I
cis-1,2-Dichloroethene	2300	2300	9.82E-06	4.05E-04	18.414	0.00746	NA	NA	1.2E-08	2.8E-08			
trans-1,2-Dichloroethene	200	200	8.54E-07	3.52E-05	18.414	0.00065	NA	NA	1.0E-09	2.4E-09			
1,2-Dichloropropane	150	150	7.46E-07	3.08E-05	18.414	0.00057	NA	1.14E-03	9.1E-10	2.1E-09		1.9E-06	I
cis-1,3-Dichloropropene	<31	15.5	7.57E-08	3.12E-06	18.414	0.00006	1.40E-02	5.71E-03	9.3E-11	2.2E-10	1.3E-12	3.8E-08	I, I
trans-1,3-Dichloropropene	<31	15.5	7.57E-08	3.12E-06	18.414	0.00006	1.40E-02	5.71E-03	9.3E-11	2.2E-10	1.3E-12	3.8E-08	I, I
Ethyl Benzene	5100	5100	2.38E-05	9.83E-04	18.414	0.01810	NA	2.86E-01	2.9E-08	6.8E-08		2.4E-07	I
Ethylene Dibromide ⁽⁵⁾	<31	15.5	1.28E-07	5.29E-06	18.414	0.00010	2.10E+00	2.60E-03	1.6E-10	3.7E-10	3.3E-10	1.4E-07	I, I
4-Ethyltoluene	2200	2200	1.16E-05	4.80E-04	18.414	0.00884	NA	NA	1.4E-08	3.3E-08			
Freon 11 (C13FMe)	18	18	1.09E-07	4.49E-06	18.414	0.00008	NA	2.00E-01	1.3E-10	3.1E-10		1.6E-09	H
Freon 113	<31	15.5	1.28E-07	5.27E-06	18.414	0.00010	NA	8.57E+00	1.57E-10	3.65E-10		4.26E-11	H
Freon 114 (C12F4Et)	470	470	3.54E-06	1.46E-04	18.414	0.00269	NA	NA	4.3E-09	1.0E-08			
Freon 12 (C12F2Me)	3500	3500	1.86E-05	7.68E-04	18.414	0.01415	NA	5.71E-02	2.3E-08	5.3E-08		9.3E-07	H
Hexachlorobutadiene	<120	60	6.89E-07	2.84E-05	18.414	0.00052	7.70E-02	NA	8.4E-10	2.0E-09	6.5E-11		I
2-Hexanone	<120	60	2.65E-07	1.09E-05	18.414	0.00020	NA	NA	3.2E-10	7.6E-10			

Table 6B
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - September 2008
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day) ⁻¹	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane ⁽⁶⁾	560,000,000	560,000,000	3.96E-01	1.63E+01	18.414	300	NA	NA	4.8E-04	1.1E-03			
4-Methyl-2-pentanone	570	570	2.51E-06	1.04E-04	18.414	0.00191	NA	8.57E-01	3.1E-09	7.2E-09		8.4E-09	I
Methylene chloride	120	120	4.49E-07	1.85E-05	18.414	0.00034	NA	2.60E-02	5.5E-10	1.3E-09		4.9E-08	
Styrene	230	230	1.05E-06	4.35E-05	18.414	0.00080	NA	2.86E-01	1.3E-09	3.0E-09		1.1E-08	I
1,1,2,2-Tetrachloroethane	<31	15.5	1.15E-07	4.72E-06	18.414	0.00009	2.03E-01	NA	1.4E-10	3.3E-10	2.8E-11		I
Tetrachloroethene	480	480	3.50E-06	1.45E-04	18.414	0.00266	2.03E-03	1.71E-01	4.3E-09	1.0E-08	8.7E-12	5.9E-08	prov, prov
TNMOC ⁽⁷⁾	666.9	666.9	3.53E-07	1.45E-05	18.414	0.00027	NA	NA	4.3E-10	1.0E-09			prov
Toluene	23000	23000	9.33E-05	3.85E-03	18.414	0.07086	NA	1.14E-01	1.1E-07	2.7E-07		2.3E-06	I
1,2,4-Trichlorobenzene	<120	60	4.79E-07	1.98E-05	18.414	0.00036	NA	1.14E-03	5.9E-10	1.4E-09		1.2E-06	prov
1,1,1-Trichloroethane	30	30	1.76E-07	7.27E-06	18.414	0.00013	NA	6.29E-01	2.2E-10	5.0E-10		8.0E-10	prov
1,1,2-Trichloroethane	<31	15.5	9.10E-08	3.75E-06	18.414	0.00007	5.60E-02	NA	1.1E-10	2.6E-10	6.2E-12		I
Trichloroethene	540	540	3.14E-06	1.29E-04	18.414	0.00238	4.00E-01	1.14E-02	3.8E-09	9.0E-09	1.5E-09	7.9E-07	prov, prov
1,2,4-Trimethylbenzene	2800	2800	1.48E-05	6.11E-04	18.414	0.01125	NA	1.71E-03	1.8E-08	4.2E-08		2.5E-05	prov
1,3,5-Trimethylbenzene	1000	1000	5.29E-06	2.18E-04	18.414	0.00402	NA	1.71E-03	6.5E-09	1.5E-08		8.8E-06	prov
Vinyl chloride	6100	6100	1.68E-05	6.92E-04	18.414	0.01275	3.08E-02	2.86E-02	2.1E-08	4.8E-08	6.3E-10	1.7E-06	I, I
m,p-Xylene	10000	10000	4.67E-05	1.93E-03	18.414	0.03550	NA	2.86E-02	5.7E-08	1.3E-07		4.7E-06	I
o-Xylene	2800	2800	1.31E-05	5.40E-04	18.414	0.00994	NA	2.86E-02	1.6E-08	3.7E-08		1.3E-06	I
Cumulative Risk -->											2.8E-09	5.2E-05	

Notes:

- ⁻¹ = Maximum concentration of BW-LFGSTACK-47A.
- ⁻² = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.
- ⁻³ = Maximum modeled concentration on the Blackwell Landfill
- ⁻⁴ = Benzyl Chloride is reported as alpha-Chlorotoluene in the Modified TO-15 Method
- ⁻⁵ = Ethylene Dibromide is reported as 1,2-Dibromomethane in the Modified TO-14 Method
- ⁻⁶ = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
- ⁻⁷ = Expressed on a carbon basis.
- (A) = Adult
- (L) = Lifetime
- = No listed screening value
- H = HEAST Databasse (EPA's Health Effects Summary Table)
- I = IRIS (EPA's Integrated Risk Information System)
- ppbv = Parts per billion by volume
- prov = provisional value
- C_{ppb, i}, M, C_{ppb}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 6C
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - November 2008
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day) ⁻¹	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	400	400	1.02E-06	4.22E-05	18.414	0.00078	NA	NA	1.3E-09	2.9E-09			
Benzene	1100	1100	3.78E-06	1.56E-04	18.414	0.00287	2.73E-02	8.57E-03	4.6E-09	1.1E-08	1.3E-10	1.3E-06	I, I
Benzyl Chloride ⁽⁴⁾	<61	30.5	1.70E-07	7.01E-06	18.414	0.00013	NA	NA	2.1E-10	4.9E-10			
Bromodichloromethane	<61	30.5	2.20E-07	9.07E-06	18.414	0.00017	NA	NA	2.7E-10	6.3E-10			
Bromoform	<61	30.5	3.39E-07	1.40E-05	18.414	0.00026	3.85E-03	NA	4.2E-10	9.7E-10	1.6E-12		I
Bromomethane	<61	30.5	1.27E-07	5.26E-06	18.414	0.00010	NA	1.43E-03	1.6E-10	3.6E-10		2.5E-07	I
2-Butanone (MEK)	560	560	1.78E-06	7.33E-05	18.414	0.00135	NA	1.43E+00	2.2E-09	5.1E-09		3.6E-09	I
Carbon Disulfide	<61	30.5	1.02E-07	4.22E-06	18.414	0.00008	NA	2.00E-01	1.3E-10	2.9E-10		1.5E-09	I
Carbon Tetrachloride	<61	30.5	2.07E-07	8.52E-06	18.414	0.00016	5.25E-02	NA	2.5E-10	5.9E-10	1.3E-11		I
Chlorobenzene	240	240	1.19E-06	4.91E-05	18.414	0.00090	NA	5.71E-03	1.5E-09	3.4E-09		6.0E-07	H
Chloroethane	490	490	1.39E-06	5.74E-05	18.414	0.00106	NA	2.86E+00	1.7E-09	4.0E-09		1.4E-09	I
Chloroform	<61	30.5	1.60E-07	6.61E-06	18.414	0.00012	8.05E-02	NA	2.0E-10	4.6E-10	1.6E-11		I
Chloromethane	<240	120	2.67E-07	1.10E-05	18.414	0.00020	6.30E-03	2.57E-02	3.3E-10	7.6E-10	2.1E-12	3.0E-08	H, I
Dibromochloromethane	<61	30.5	2.80E-07	1.15E-05	18.414	0.00021	NA	NA	3.4E-10	8.0E-10			
1,2-Dichlorobenzene	24	24	1.55E-07	6.41E-06	18.414	0.00012	NA	5.71E-02	1.9E-10	4.4E-10		7.8E-09	H
1,3-Dichlorobenzene	<61	30.5	1.97E-07	8.14E-06	18.414	0.00015	NA	NA	2.4E-10	5.6E-10			
1,4-Dichlorobenzene	840	840	5.44E-06	2.24E-04	18.414	0.00413	NA	2.29E-01	6.7E-09	1.6E-08		6.8E-08	I
1,1-Dichloroethane	110	110	4.79E-07	1.98E-05	18.414	0.00036	NA	1.43E-01	5.9E-10	1.4E-09		9.6E-09	H
1,2-Dichloroethane	<61	30.5	1.33E-07	5.48E-06	18.414	0.00010	9.10E-02	NA	1.6E-10	3.8E-10	1.5E-11		I
1,1-Dichloroethene	<61	30.5	1.30E-07	5.37E-06	18.414	0.00010	NA	5.71E-02	1.6E-10	3.7E-10		6.5E-09	I
cis-1,2-Dichloroethene	2000	2000	8.54E-06	3.52E-04	18.414	0.00648	NA	NA	1.0E-08	2.4E-08			
trans-1,2-Dichloroethene	180	180	7.68E-07	3.17E-05	18.414	0.00058	NA	NA	9.4E-10	2.2E-09			
1,2-Dichloropropane	110	110	5.47E-07	2.26E-05	18.414	0.00042	NA	1.14E-03	6.7E-10	1.6E-09		1.4E-06	I
cis-1,3-Dichloropropene	<61	30.5	1.49E-07	6.15E-06	18.414	0.00011	1.40E-02	5.71E-03	1.8E-10	4.3E-10	2.6E-12	7.5E-08	I, I
trans-1,3-Dichloropropene	<61	30.5	1.49E-07	6.15E-06	18.414	0.00011	1.40E-02	5.71E-03	1.8E-10	4.3E-10	2.6E-12	7.5E-08	I, I
Ethyl Benzene	3600	3600	1.68E-05	6.94E-04	18.414	0.01278	NA	2.86E-01	2.1E-08	4.8E-08		1.7E-07	I
Ethylene Dibromide ⁽⁵⁾	<61	30.5	2.52E-07	1.04E-05	18.414	0.00019	2.10E+00	2.60E-03	3.1E-10	7.2E-10	6.5E-10	2.8E-07	I, I
4-Ethyltoluene	1900	1900	1.01E-05	4.15E-04	18.414	0.00764	NA	NA	1.2E-08	2.9E-08			
Freon 11 (C13FMe)	31	31	1.88E-07	7.73E-06	18.414	0.00014	NA	2.00E-01	2.3E-10	5.4E-10		2.7E-09	H
Freon 113	<61	30.5	2.52E-07	1.04E-05	18.414	0.00019	NA	8.57E+00	3.08E-10	7.19E-10		8.39E-11	H
Freon 114 (C12F4Et)	470	470	3.54E-06	1.46E-04	18.414	0.00269	NA	NA	4.3E-09	1.0E-08			
Freon 12 (C12F2Me)	3900	3900	2.08E-05	8.56E-04	18.414	0.01577	NA	5.71E-02	2.5E-08	5.9E-08		1.0E-06	H
Hexachlorobutadiene	<240	120	1.38E-06	5.68E-05	18.414	0.00105	7.70E-02	NA	1.7E-09	3.9E-09	1.3E-10		I
2-Hexanone	<240	120	5.29E-07	2.18E-05	18.414	0.00040	NA	NA	6.5E-10	1.5E-09			

Table 6C
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - November 2008
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day) ⁻¹	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane ⁽⁶⁾	570,000,000	570,000,000	4.03E-01	1.66E+01	18.414	306	NA	NA	4.9E-04	1.1E-03			
4-Methyl-2-pentanone	380	380	1.68E-06	6.91E-05	18.414	0.00127	NA	8.57E-01	2.1E-09	4.8E-09		5.6E-09	I
Methylene chloride	150	150	5.61E-07	2.31E-05	18.414	0.00043	NA	2.60E-02	6.9E-10	1.6E-09		6.2E-08	
Styrene	<61	30.5	1.40E-07	5.77E-06	18.414	0.00011	NA	2.86E-01	1.7E-10	4.0E-10		1.4E-09	I
1,1,2,2-Tetrachloroethane	<61	30.5	2.25E-07	9.30E-06	18.414	0.00017	2.03E-01	NA	2.8E-10	6.4E-10	5.6E-11		I
Tetrachloroethene	430	430	3.14E-06	1.29E-04	18.414	0.00238	2.03E-03	1.71E-01	3.8E-09	9.0E-09	7.8E-12	5.2E-08	prov, prov
TNMOC ⁽⁷⁾	236,900	236,900	1.25E-04	5.17E-03	18.414	0.09513	NA	NA	1.5E-07	3.6E-07			prov
Toluene	19000	19000	7.71E-05	3.18E-03	18.414	0.05854	NA	1.14E-01	9.4E-08	2.2E-07		1.9E-06	I
1,2,4-Trichlorobenzene	<240	120	9.59E-07	3.95E-05	18.414	0.00073	NA	1.14E-03	1.2E-09	2.7E-09		2.4E-06	prov
1,1,1-Trichloroethane	21	21	1.23E-07	5.09E-06	18.414	0.00009	NA	6.29E-01	1.5E-10	3.5E-10		5.6E-10	prov
1,1,2-Trichloroethane	<61	30.5	1.79E-07	7.39E-06	18.414	0.00014	5.60E-02	NA	2.2E-10	5.1E-10	1.2E-11		I
Trichloroethene	550	550	3.19E-06	1.32E-04	18.414	0.00243	4.00E-01	1.14E-02	3.9E-09	9.1E-09	1.6E-09	8.0E-07	prov, prov
1,2,4-Trimethylbenzene	1800	1800	9.53E-06	3.93E-04	18.414	0.00723	NA	1.71E-03	1.2E-08	2.7E-08		1.6E-05	prov
1,3,5-Trimethylbenzene	660	660	3.49E-06	1.44E-04	18.414	0.00265	NA	1.71E-03	4.3E-09	1.0E-08		5.8E-06	prov
Vinyl chloride	4800	4800	1.32E-05	5.45E-04	18.414	0.01003	3.08E-02	2.86E-02	1.6E-08	3.8E-08	5.0E-10	1.3E-06	I, I
m,p-Xylene	7400	7400	3.46E-05	1.43E-03	18.414	0.02627	NA	2.86E-02	4.2E-08	9.9E-08		3.5E-06	I
o-Xylene	2200	2200	1.03E-05	4.24E-04	18.414	0.00781	NA	2.86E-02	1.3E-08	2.9E-08		1.0E-06	I
Cumulative Risk -->											3.1E-09	3.8E-05	

Notes:

- ⁻¹ = Maximum concentration of BW-LFGSTACK-48A.
- ⁻² = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.
- ⁻³ = Maximum modeled concentration on the Blackwell Landfill
- ⁻⁴ = Benzyl Chloride is reported as alpha-Chlorotoluene in the Modified TO-14 Method
- ⁻⁵ =Ethylene Dibromide is reported as 1,2-Dibromomethane in the Modified TO-14 Method
- ⁻⁶ = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
- ⁻⁷ = Expressed on a carbon basis.
- (A) = Adult
- (L) = Lifetime
- = No listed screening value
- H = HEAST Databasse (EPA's Health Effects Summary Table)
- I = IRIS (EPA's Inategrated Risk Information System)
- ppbv = Parts per billion by volume
- prov = provisional value
- C_{ppb, i}, M, C_{ppb, i}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 6D
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - January 2009
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	120	120	3.07E-07	1.27E-05	18.414	0.00023	NA	NA	3.8E-10	8.8E-10			
Benzene	1,100	1,100	3.78E-06	1.56E-04	18.414	0.00287	2.73E-02	8.57E-03	4.6E-09	1.1E-08	1.3E-10	1.3E-06	I, I
Benzyl Chloride ⁽⁴⁾	<70	35	1.95E-07	8.05E-06	18.414	0.00015	NA	NA	2.4E-10	5.6E-10			
Bromodichloromethane	<70	35	2.52E-07	1.04E-05	18.414	0.00019	NA	NA	3.1E-10	7.2E-10			
Bromoform	<70	35	3.89E-07	1.61E-05	18.414	0.00030	3.85E-03	NA	4.8E-10	1.1E-09	1.8E-12		I
Bromomethane	<70	35	1.46E-07	6.03E-06	18.414	0.00011	NA	1.43E-03	1.8E-10	4.2E-10		2.9E-07	I
2-Butanone (MEK)	220	220	6.99E-07	2.88E-05	18.414	0.00053	NA	1.43E+00	8.6E-10	2.0E-09		1.4E-09	I
Carbon Disulfide	<70	35	1.17E-07	4.84E-06	18.414	0.00009	NA	2.00E-01	1.4E-10	3.4E-10		1.7E-09	I
Carbon Tetrachloride	<70	35	2.37E-07	9.78E-06	18.414	0.00018	5.25E-02	NA	2.9E-10	6.8E-10	1.5E-11		I
Chlorobenzene	310	310	1.54E-06	6.34E-05	18.414	0.00117	NA	5.71E-03	1.9E-09	4.4E-09		7.7E-07	H
Chloroethane	530	530	1.51E-06	6.21E-05	18.414	0.00114	NA	2.86E+00	1.8E-09	4.3E-09		1.5E-09	I
Chloroform	<70	35	1.84E-07	7.59E-06	18.414	0.00014	8.05E-02	NA	2.3E-10	5.3E-10	1.8E-11		I
Chloromethane	<280	140	3.11E-07	1.28E-05	18.414	0.00024	6.30E-03	2.57E-02	3.8E-10	8.9E-10	2.4E-12	3.5E-08	H, I
Dibromochloromethane	<70	35	3.21E-07	1.32E-05	18.414	0.00024	NA	NA	3.9E-10	9.2E-10			
1,2-Dichlorobenzene	23	23	1.49E-07	6.14E-06	18.414	0.00011	NA	5.71E-02	1.8E-10	4.3E-10		7.4E-09	H
1,3-Dichlorobenzene	<70	35	2.27E-07	9.34E-06	18.414	0.00017	NA	NA	2.8E-10	6.5E-10			
1,4-Dichlorobenzene	700	700	4.53E-06	1.87E-04	18.414	0.00344	NA	2.29E-01	5.5E-09	1.3E-08		5.7E-08	I
1,1-Dichloroethane	54	54	2.35E-07	9.70E-06	18.414	0.00018	NA	1.43E-01	2.9E-10	6.7E-10		4.7E-09	H
1,2-Dichloroethane	<70	35	1.53E-07	6.29E-06	18.414	0.00012	9.10E-02	NA	1.9E-10	4.4E-10	1.7E-11		I
1,1-Dichloroethene	<70	35	1.49E-07	6.16E-06	18.414	0.00011	NA	5.71E-02	1.8E-10	4.3E-10		7.5E-09	I
cis-1,2-Dichloroethene	740	740	3.16E-06	1.30E-04	18.414	0.00240	NA	NA	3.9E-09	9.0E-09			
trans-1,2-Dichloroethene	140	140	5.98E-07	2.46E-05	18.414	0.00045	NA	NA	7.3E-10	1.7E-09			
1,2-Dichloropropane	100	100	4.98E-07	2.05E-05	18.414	0.00038	NA	1.14E-03	6.1E-10	1.4E-09		1.2E-06	I
cis-1,3-Dichloropropene	<70	35	1.71E-07	7.05E-06	18.414	0.00013	1.40E-02	5.71E-03	2.1E-10	4.9E-10	2.9E-12	8.6E-08	I, I
trans-1,3-Dichloropropene	<70	35	1.71E-07	7.05E-06	18.414	0.00013	1.40E-02	5.71E-03	2.1E-10	4.9E-10	2.9E-12	8.6E-08	I, I
Ethyl Benzene	3,500	3,500	1.64E-05	6.75E-04	18.414	0.01242	NA	2.86E-01	2.0E-08	4.7E-08		1.6E-07	I
Ethylene Dibromide ⁽⁵⁾	<70	35	2.90E-07	1.19E-05	18.414	0.00022	2.10E+00	2.60E-03	3.5E-10	8.3E-10	7.4E-10	3.2E-07	I, I
4-Ethyltoluene	1,800	1,800	9.53E-06	3.93E-04	18.414	0.00723	NA	NA	1.2E-08	2.7E-08			
Freon 11 (C13FMe)	15	15	9.07E-08	3.74E-06	18.414	0.00007	NA	2.00E-01	1.1E-10	2.6E-10		1.3E-09	H
Freon 113	<70	35	2.89E-07	1.19E-05	18.414	0.00022	NA	8.57E+00	3.53E-10	8.25E-10		9.62E-11	H
Freon 114 (C12F4Et)	390	390	2.94E-06	1.21E-04	18.414	0.00223	NA	NA	3.6E-09	8.4E-09			
Freon 12 (C12F2Me)	2,200	2,200	1.17E-05	4.83E-04	18.414	0.00889	NA	5.71E-02	1.4E-08	3.3E-08		5.9E-07	H
Hexachlorobutadiene	<280	140	1.61E-06	6.63E-05	18.414	0.00122	7.70E-02	NA	2.0E-09	4.6E-09	1.5E-10		I
2-Hexanone	<280	140	6.17E-07	2.55E-05	18.414	0.00047	NA	NA	7.6E-10	1.8E-09			

Table 6D
Cumulative Risk of Exposure to Landfill Gas
Recreational Portions of Landfill - January 2009
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration ⁽¹⁾ C _{ppb, i} (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration ⁽²⁾ g/L	Emission Rate ⁽²⁾ E _i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell ⁽³⁾ R _i (ug/m3)	Slope Factor (mg/kg-day) ⁻¹	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane ⁽⁶⁾	560,000,000	560,000,000	3.96E-01	1.63E+01	18.414	300	NA	NA	4.8E-04	1.1E-03			
4-Methyl-2-pentanone	<70	35	1.54E-07	6.37E-06	18.414	0.00012	NA	8.57E-01	1.9E-10	4.4E-10		5.1E-10	I
Methylene chloride	100	100	3.74E-07	1.54E-05	18.414	0.00028	NA	2.60E-02	4.6E-10	1.1E-09		4.1E-08	
Styrene	150	150	6.88E-07	2.84E-05	18.414	0.00052	NA	2.86E-01	8.4E-10	2.0E-09		6.9E-09	I
1,1,2,2-Tetrachloroethane	<70	35	2.59E-07	1.07E-05	18.414	0.00020	2.03E-01	NA	3.2E-10	7.4E-10	6.4E-11		I
Tetrachloroethene	170	170	1.24E-06	5.12E-05	18.414	0.00094	2.03E-03	1.71E-01	1.5E-09	3.5E-09	3.1E-12	2.1E-08	prov, prov
TNMOC ⁽⁷⁾	793,900	793,900	4.20E-04	1.73E-02	18.414	0.31881	NA	NA	5.1E-07	1.2E-06			prov
Toluene	14,000	14,000	5.68E-05	2.34E-03	18.414	0.04313	NA	1.14E-01	7.0E-08	1.6E-07		1.4E-06	I
1,2,4-Trichlorobenzene	<240	140	1.12E-06	4.61E-05	18.414	0.00085	NA	1.14E-03	1.4E-09	3.2E-09		2.8E-06	prov
1,1,1-Trichloroethane	<70	35	2.06E-07	8.48E-06	18.414	0.00016	NA	6.29E-01	2.5E-10	5.9E-10		9.3E-10	prov
1,1,2-Trichloroethane	<70	35	2.06E-07	8.48E-06	18.414	0.00016	5.60E-02	NA	2.5E-10	5.9E-10	1.4E-11		I
Trichloroethene	260	260	1.51E-06	6.23E-05	18.414	0.00115	4.00E-01	1.14E-02	1.8E-09	4.3E-09	7.4E-10	3.8E-07	prov, prov
1,2,4-Trimethylbenzene	2,000	2,000	1.06E-05	4.36E-04	18.414	0.00804	NA	1.71E-03	1.3E-08	3.0E-08		1.8E-05	prov
1,3,5-Trimethylbenzene	730	730	3.86E-06	1.59E-04	18.414	0.00293	NA	1.71E-03	4.7E-09	1.1E-08		6.5E-06	prov
Vinyl chloride	4,600	4,600	1.27E-05	5.22E-04	18.414	0.00961	3.08E-02	2.86E-02	1.5E-08	3.6E-08	4.8E-10	1.3E-06	I, I
m,p-Xylene	7,200	7,200	3.37E-05	1.39E-03	18.414	0.02556	NA	2.86E-02	4.1E-08	9.6E-08		3.4E-06	I
o-Xylene	2,100	2,100	9.82E-06	4.05E-04	18.414	0.00745	NA	2.86E-02	1.2E-08	2.8E-08		9.8E-07	I
Cumulative Risk -->											2.4E-09	3.9E-05	

Notes:

- ⁻¹ = Maximum concentration of BW-LFGSTACK-49A.
- ⁻² = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.
- ⁻³ = Maximum modeled concentration on the Blackwell Landfill
- ⁻⁴ = Benzyl Chloride is reported as alpha-Chlorotoluene in the Modified TO-14 Method
- ⁻⁵ =Ethylene Dibromide is reported as 1,2-Dibromoethane in the Modified TO-14 Method
- ⁻⁶ = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
- ⁻⁷ = Expressed on a carbon basis.
- (A) = Adult
- (L) = Lifetime
- = No listed screening value
- H = HEAST Databasse (EPA's Health Effects Summary Table)
- I = IRIS (EPA's Inategrated Risk Information System)
- ppbv = Parts per billion by volume
- prov = provisional value
- C_{ppb, i}, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

The frequencies will be modified as experience with the systems dictate. The following forms are available for use during inspection, monitoring, and maintenance activities:

- Site Visit Operating Log
- Leachate Disposal Log
- Leachate and LFG Monitoring Form
- Maintenance and Repair Record Form
- Inspection Reporting Form
- Gas Vent Monitoring Form
- Replacement Equipment and Parts Log

AS-NEEDED BASIS

- | | |
|---|---|
| <ul style="list-style-type: none"> • Landfill Cover
(following 10 yr., 24 hr rainfall event) | <ul style="list-style-type: none"> – Inspect for erosion, cracks – Inspect for water ponding – Inspect for siltation of drainage ways – Inspect for gas bubbling through landfill topsoil |
| <ul style="list-style-type: none"> • Control Building
(following disposal of leachate) | <ul style="list-style-type: none"> – Record pump counter readings – Record depth of leachate in holding tank (before and after disposal) |
| <ul style="list-style-type: none"> • Site Conditions | <ul style="list-style-type: none"> – Document date and time – Document weather conditions – Conduct general inspection (fence, locks, sign, etc.) |
| <ul style="list-style-type: none"> • Main Vent Stack | <ul style="list-style-type: none"> – Inspect valve settings – Conduct general inspection (fence, locks, signs, etc.) |

WEEKLY BASIS

- | | |
|---|---|
| <ul style="list-style-type: none"> • Control Building | <ul style="list-style-type: none"> – Visually check building exterior alarm lights – Visually check panel indicator lights – Check heater thermostat setting and status – Visually check building vents and fans – Inspect compressor and dryer operation – Drain water traps on compressor and dryer |
| <ul style="list-style-type: none"> • Leachate Holding Tank | <ul style="list-style-type: none"> – Inspect valve settings – Check volume in tank – General inspection – Visually check tank, leak detection, and dripleg riser condition |

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

BI-MONTHLY

- | | |
|---|--|
| • Leachate Extraction Wells (wellheads) | <ul style="list-style-type: none"> – Measure leachate level during period of high atmospheric pressure – Document pump cycle counts – Conduct general inspection – Adjust needle valve if the extraction rate is to be modified. Check air supply pressure – Check air pump pressure – Check level sensor air pressure – Inspect flow meter operation – Check air supply and pump discharge valve settings |
| • Leachate Lift Stations | <ul style="list-style-type: none"> – Document pump cycle counts – Conduct general inspection – Verify pump operation – Check position of manual isolation valve |
| • LFG Vents | <ul style="list-style-type: none"> – Measure leachate level during period of high atmospheric pressure – Conduct general inspection |
| • Main Vent Stack | <ul style="list-style-type: none"> – Conduct general inspection – Check manual valve position |

SEMI-ANNUALLY

- | | |
|---|--|
| • Leachate Extraction Wells (wellheads) | <ul style="list-style-type: none"> – Measure percent methane (CH₄) – Measure percent oxygen (O₂) – Measure percent carbon dioxide (CO₂) – Measure static pressure |
| • Leachate Lift Stations | <ul style="list-style-type: none"> – Measure percent methane (CH₄) – Measure percent oxygen (O₂) – Measure percent carbon dioxide (CO₂) – Measure static pressure |
| • LFG Vents | <ul style="list-style-type: none"> – Measure percent methane (CH₄) – Measure percent oxygen (O₂) – Measure percent carbon dioxide (CO₂) – Measure static pressure – Measure gas flow rate – Measure gas temperature |
| • Main Vent Stack | <ul style="list-style-type: none"> – Measure percent methane (CH₄) – Measure percent oxygen (O₂) – Measure percent carbon dioxide (CO₂) – Measure gas flow rate – Measure gas temperature |

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

Monitoring Location	Bi-Monthly O&M Activities		Semi-Annual O&M Activities	Connected to LCS and LFG extraction system ¹
	Abandoned ¹	Monitor Leachate Levels ¹	Monitor LFG ^{1,2}	
SV-1		X		
SV-2		X		
SV-3	X			
SV-4		X	X	X
SV-5		X	X	X
SV-6		X		
SV-7		X		
SV-8		X	X	X
SV-9		X	X	X
SV-10	X			
SV-11		X		
SV-12		X		
DV-1	X			
DV-2	X			
DV-3		X		
DV-4		X		
DV-5 ³		X	X	X
DV-6		X		
DV-7		X		
DV-8		X	X	X
DV-9		X	X	X
DV-10		X	X	X
DV-11		X		
DV-12	X			
DV-13		X		
DV-14		X		
DV-15 ³		X	X	X
DV-16 ³		X	X	X
DV-17		X	X	X
DV-18		X	X	X
EW-1 ⁴		X	X	X
EW-1A ⁴		X	X	X
EW-2 ⁴		X	X	X
EW-3 ⁴		X	X	X
EW-4 ^{4,5}			X	X
EW-5 ⁴		X	X	X
EW-6 ⁴		X	X	X
EW-7 ⁴		X	X	X
EW-8 ^{4,6}				X
LS01 ⁴			X	X
LS02 ⁷				X
Main Vent ⁸			X	X

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

Notes:

1. "X" indicates data collection or action taken.
2. LFG monitoring includes static pressure, flow velocity, temperature, and composition (i.e., % CH₄, CO₂, and O₂).
3. Leachate level not measured. LFG vents DV-5, DV-15 and DV-16 measure groundwater levels.
4. LFG flow velocity and temperature are not measured at extraction wells or lift stations. Pump cycle counts documented.
5. Due to the configuration of EW-4, leachate levels are difficult or impossible to collect.
6. Due to the configuration of EW-8, leachate levels and LFG parameters are not collected. Leachate levels and LFG parameters from DV-11 are assumed to be similar to EW-8.
7. The pneumatic pump from LS02 was removed. No O&M data collected.
8. Static pressure is not measured at the main vent stack. The main vent stack is open to the atmosphere.

QUARTERLY

- | | |
|--|--|
| • Compressor/Dryer Systems | – Inspect and clean filters. Lubricate, if necessary |
| • Leachate Holding Tank | – Conduct required analytical testing |
| • Control Station | – Remove water from condensate trap on supply air line |
| • Site Inspection | – Inspect fenced areas (main vent stack, tank and compressor station)
– Inspect posted signs and notices
– Inspect access, including roads, to LCS and LFG system components
– Inspect flush-mount vaults
– Inspect for excessive or improper vegetation in, or around, LCS or LFG system components |
| • Landfill Gas Sampling (at main vent stack) | – Conduct required LFG analytical testing
– Measure gas flow rate |
| • Landfill Cover | – Inspect for erosion, cracks
– Inspect for water ponding
– Inspect for siltation of drainage ways
– Inspect for stressed or dead vegetation |

SEMI-ANNUALLY

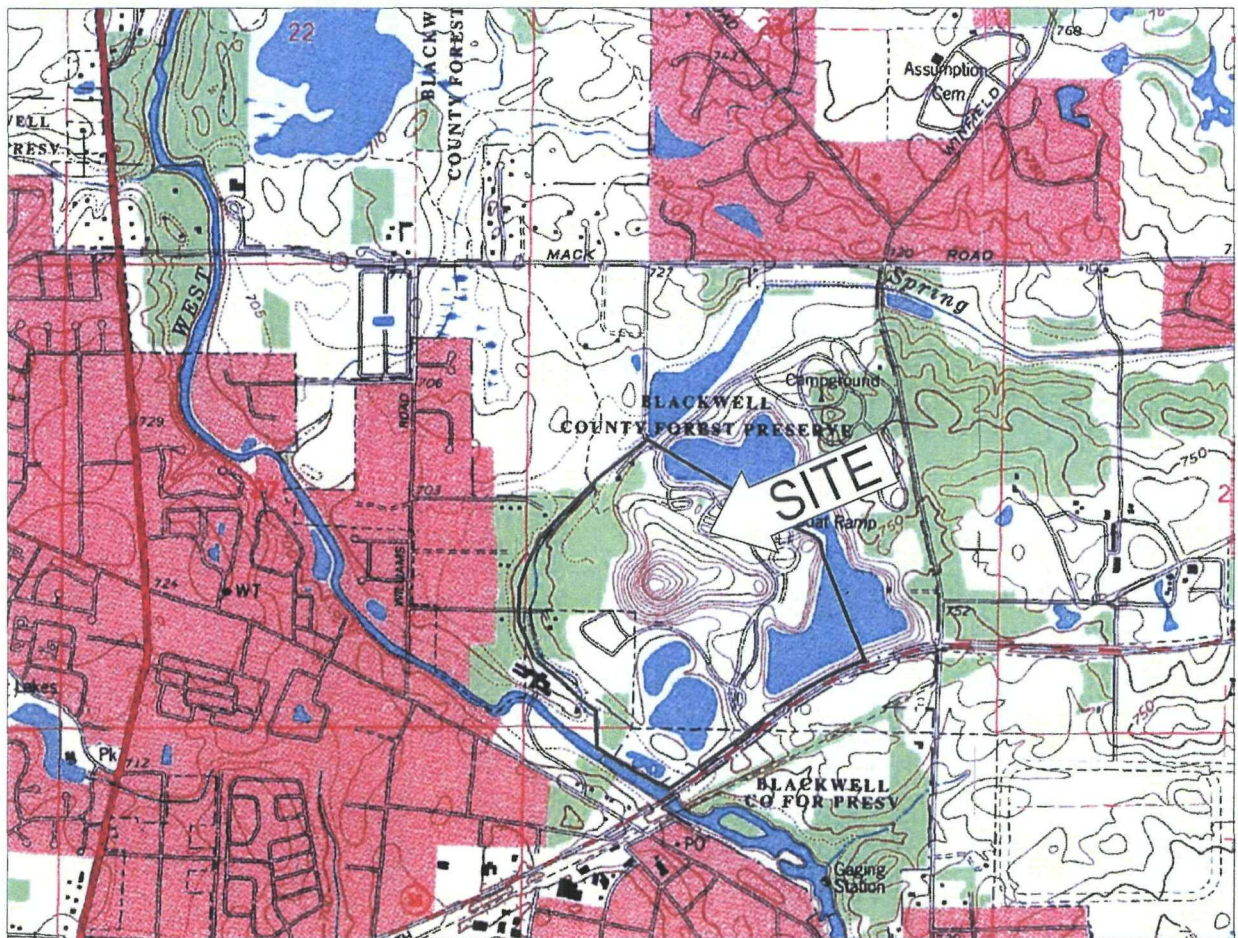
- | | |
|--------------------------|---|
| • Leachate Holding Tank | – Conduct required analytical testing |
| • Driplegs DL01 and DL02 | – Check liquid levels in "u" traps if an active LFG extraction system is installed. |

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

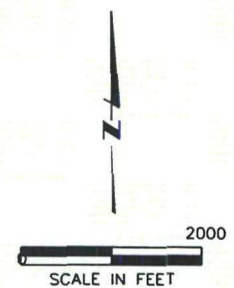
ANNUALLY

- | | |
|--|--|
| • Compressor/Dryer Systems | – Perform annual maintenance as necessary |
| • All Valves | – Confirm valve operation by operating throughout entire range of motion several times |
| • Leachate Holding Tank | – Inspect liquid level floats, interlocked controls and warning lights operation
– Inspect moisture probes (leak detection riser and tank interstice) |
| • Padlocks, Gates, Doors, etc. | – Lubricate with grease and verify working condition |
| • Lift Station LS01
(if system is made inoperable by shutting off air supply valve) | – Bleed out condensate in air supply line |

FIGURES



BASE MAP DEVELOPED FROM THE
NAPERVILLE, ILLINOIS 7.5 MINUTE
U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP
DATED: 1993



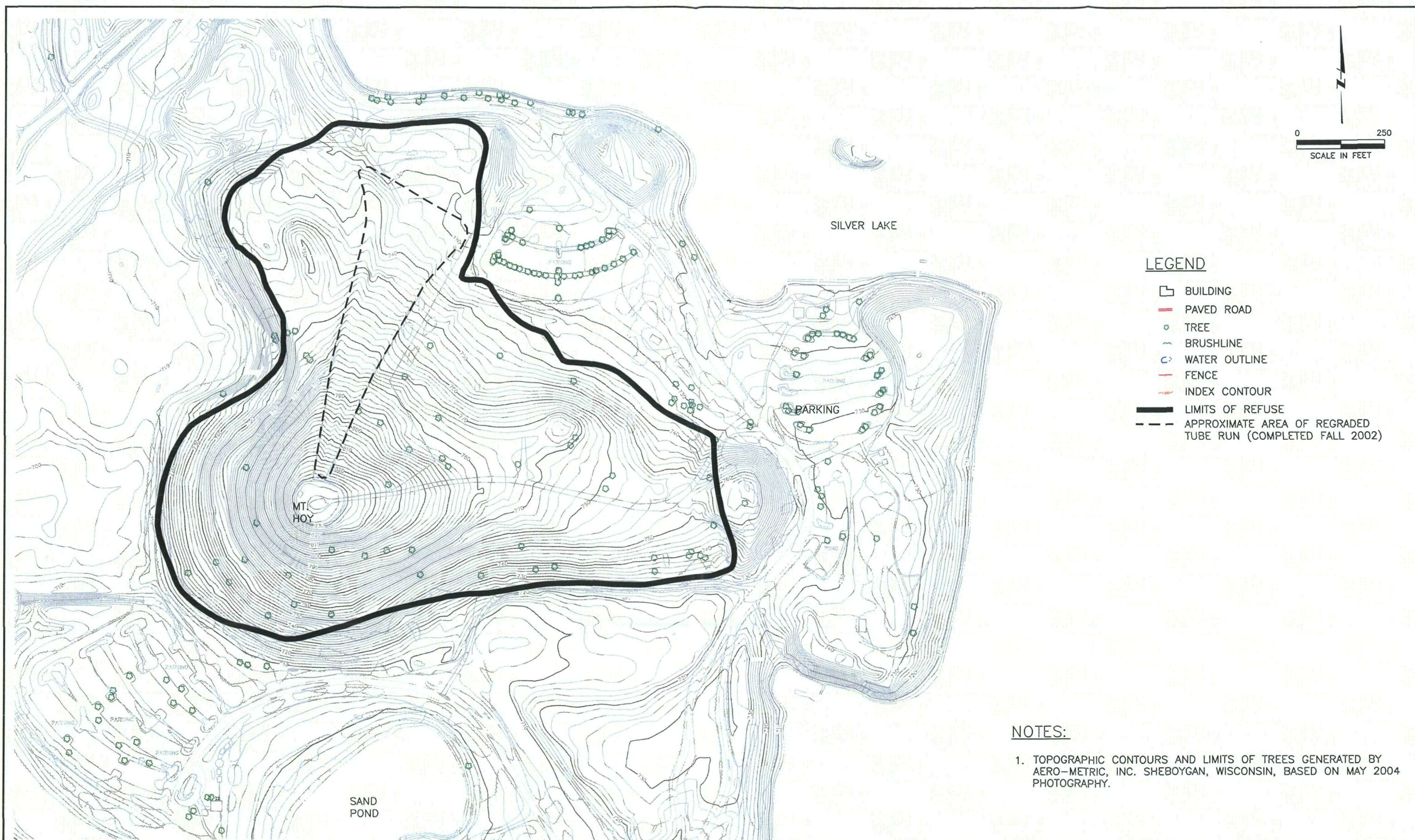
BLACKWELL LANDFILL NPL SITE
DUPAGE COUNTY, ILLINOIS

SITE LOCATION MAP

FIGURE

1





LEGEND

- BUILDING
- PAVED ROAD
- TREE
- BRUSHLINE
- WATER OUTLINE
- FENCE
- INDEX CONTOUR
- LIMITS OF REFUSE
- APPROXIMATE AREA OF REGRADED TUBE RUN (COMPLETED FALL 2002)

NOTES:

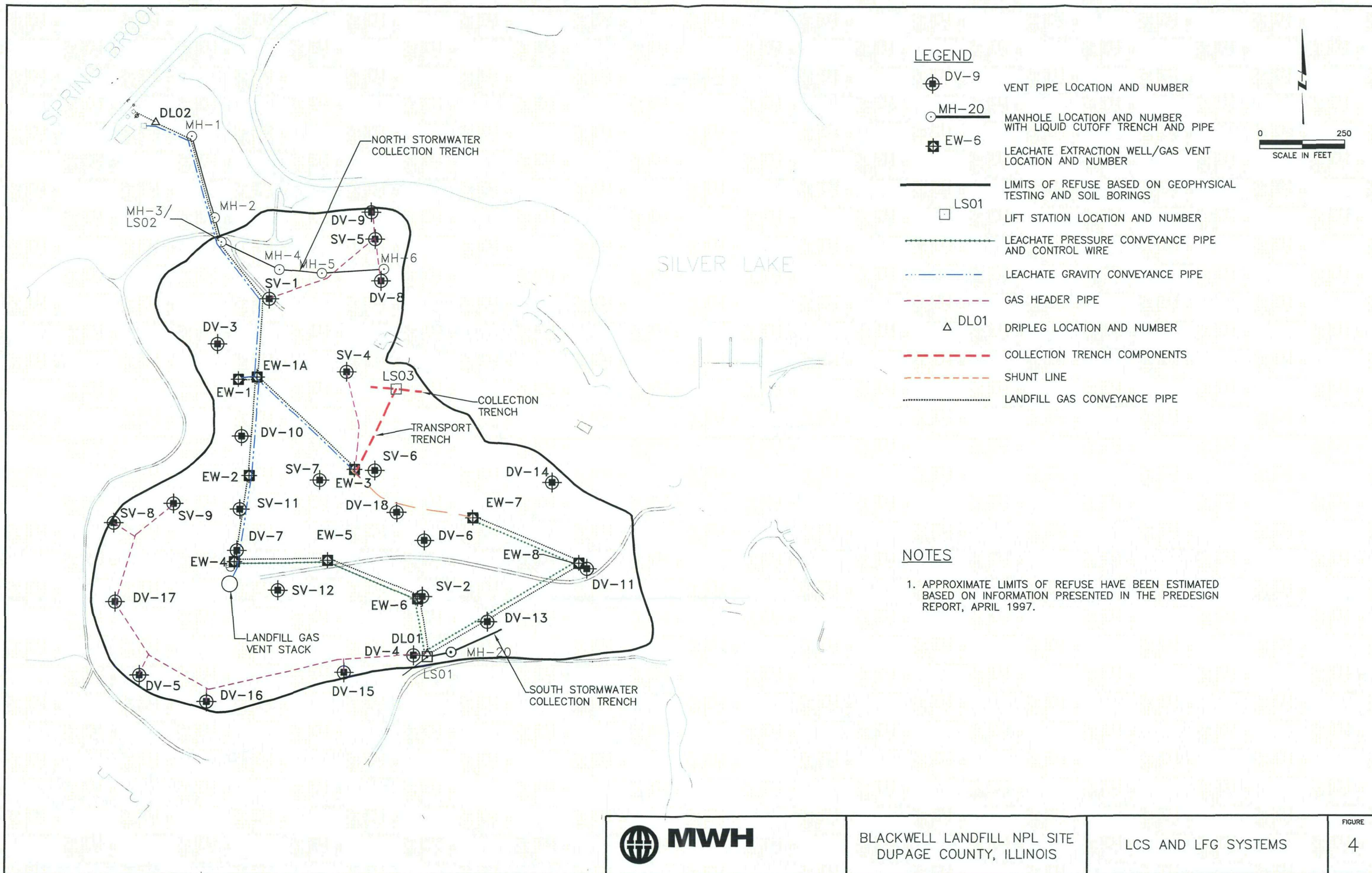
1. TOPOGRAPHIC CONTOURS AND LIMITS OF TREES GENERATED BY AERO-METRIC, INC. SHEBOYGAN, WISCONSIN, BASED ON MAY 2004 PHOTOGRAPHY.



BLACKWELL LANDFILL NPL SITE
DUPAGE COUNTY, ILLINOIS

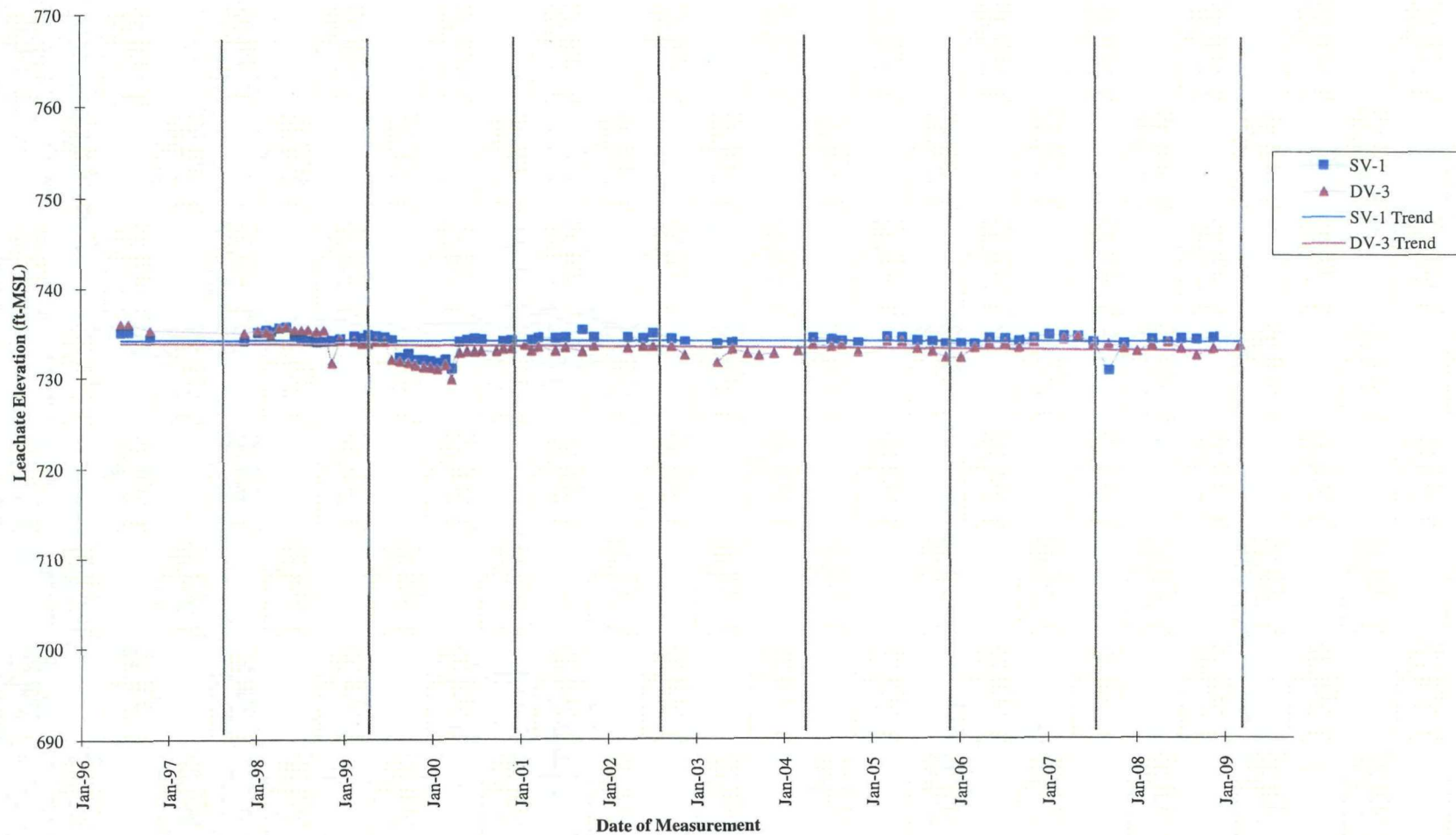
TOPOGRAPHIC MAP (2004)

FIGURE
3

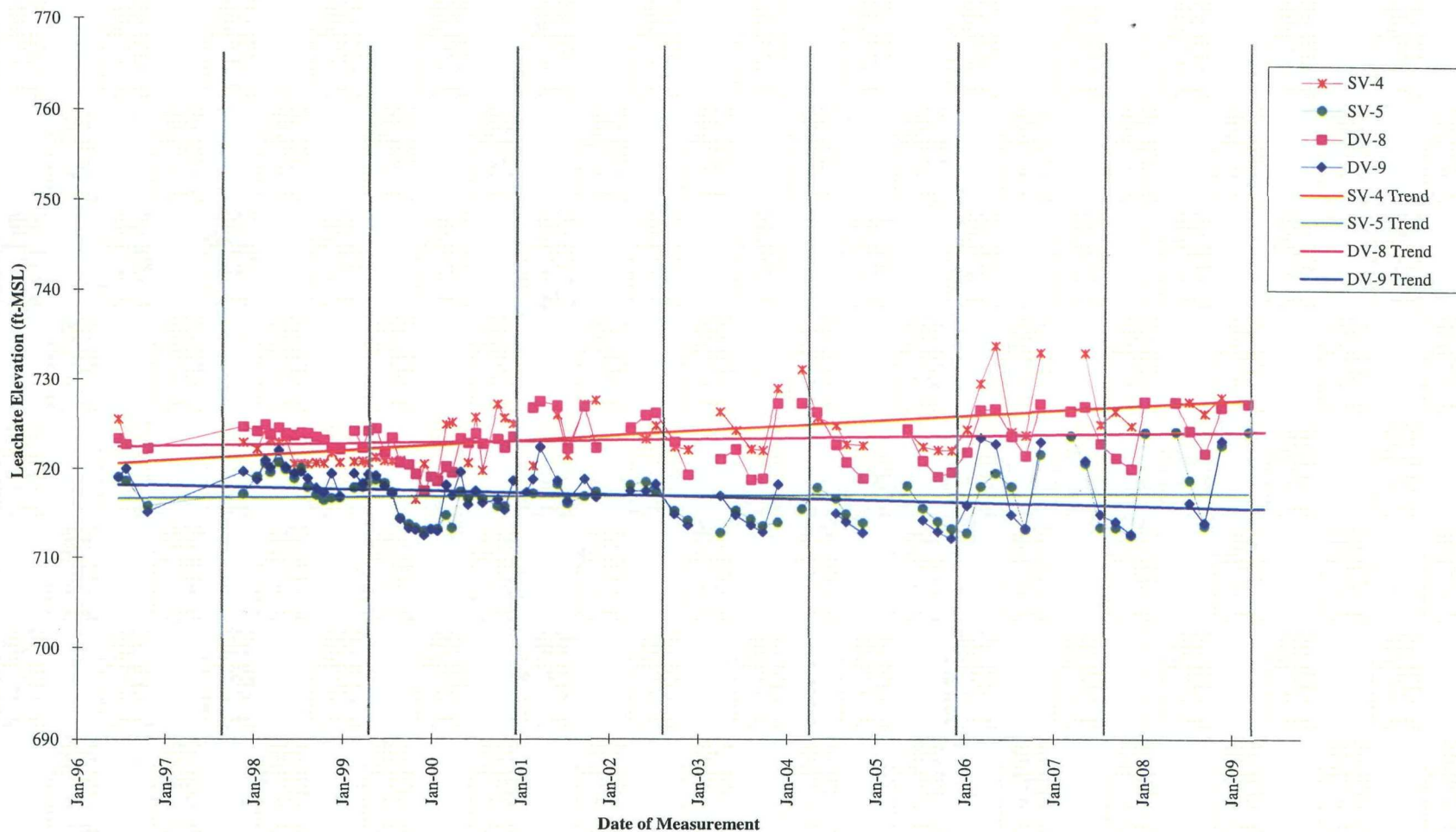


DRAWINGS

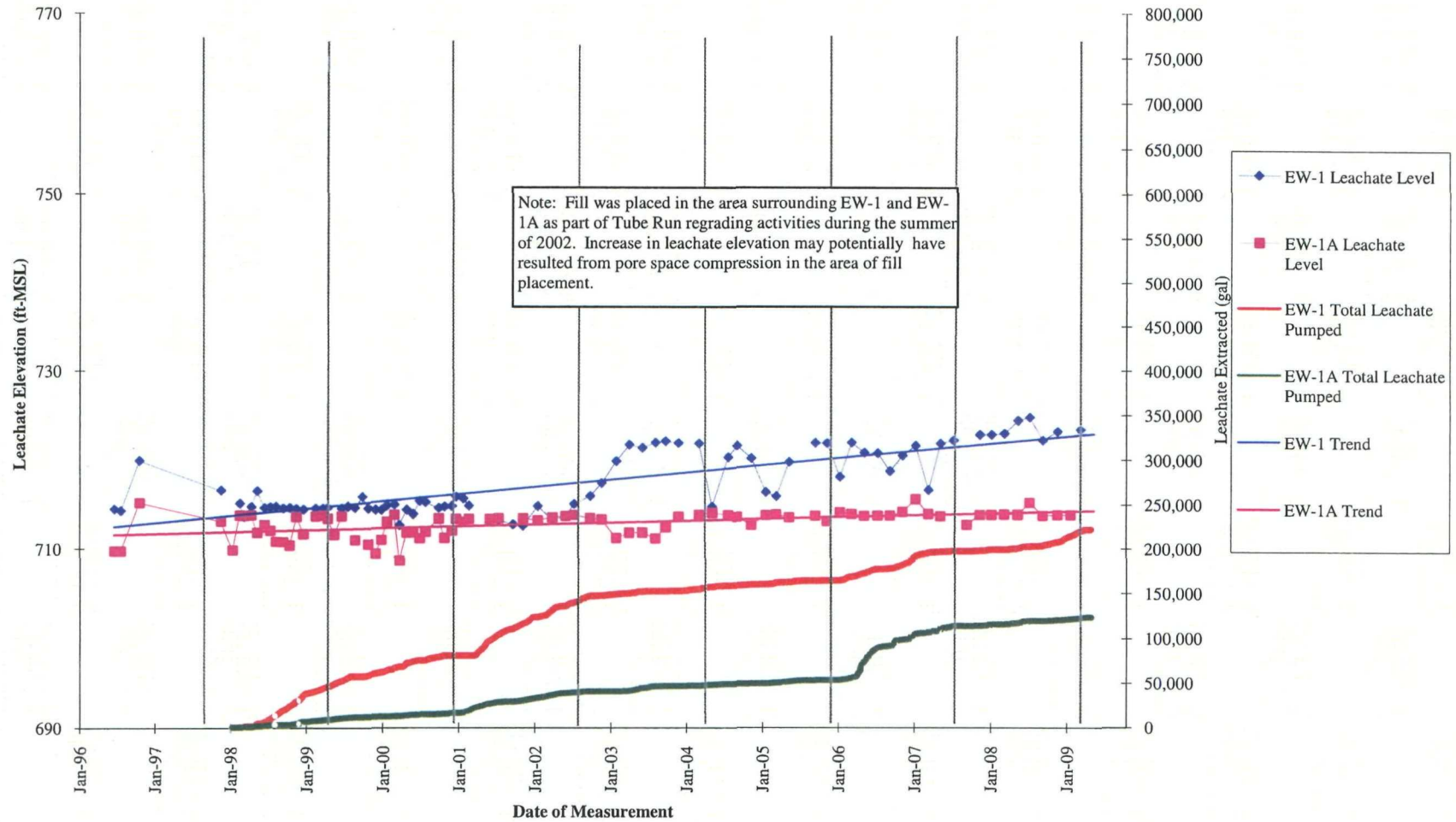
Drawing 1
Leachate Elevations in Landfill Area 1
Blackwell Landfill NPL Site



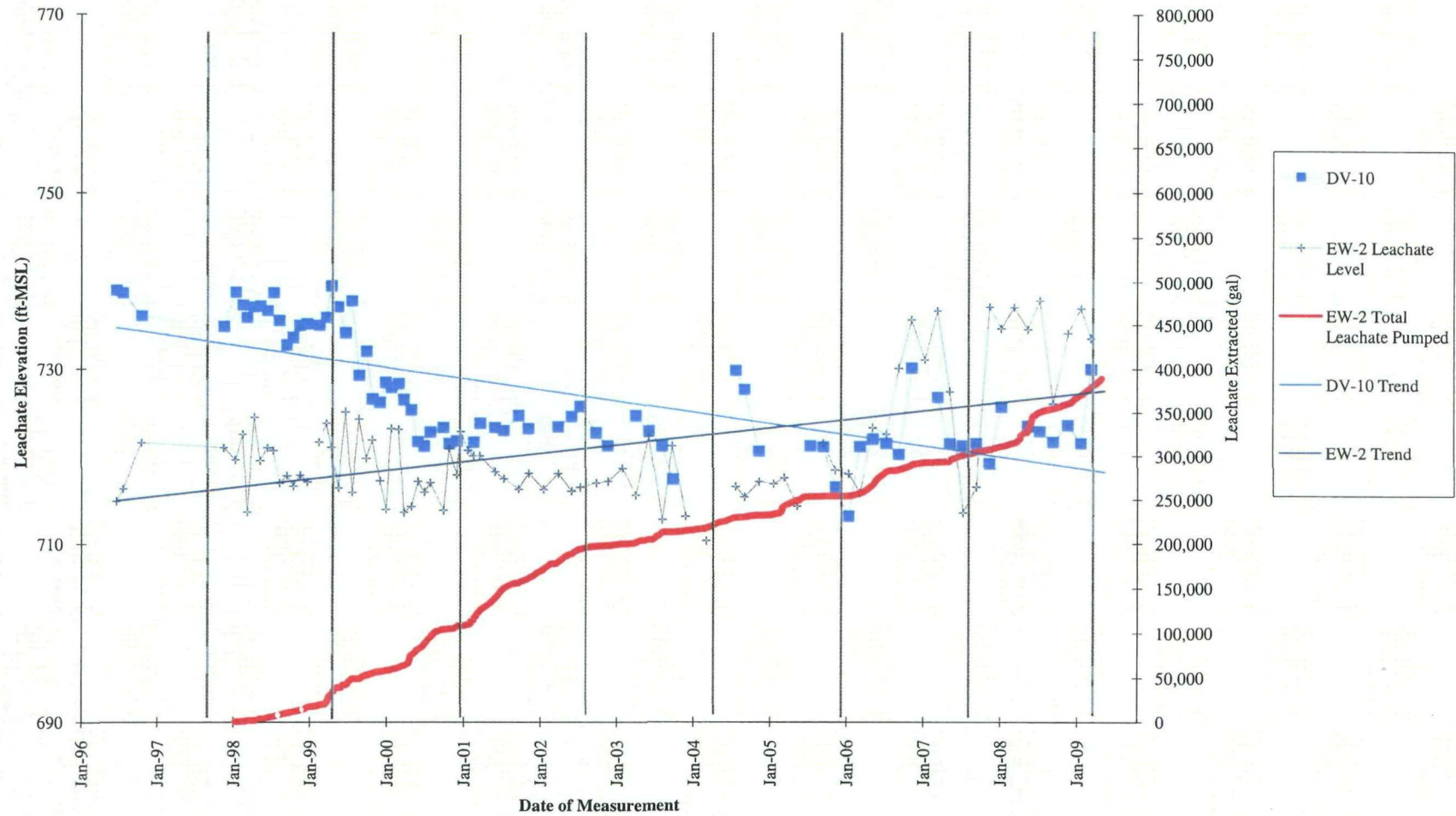
Drawing 2
Leachate Elevations in Landfill Area 2
Blackwell Landfill NPL Site



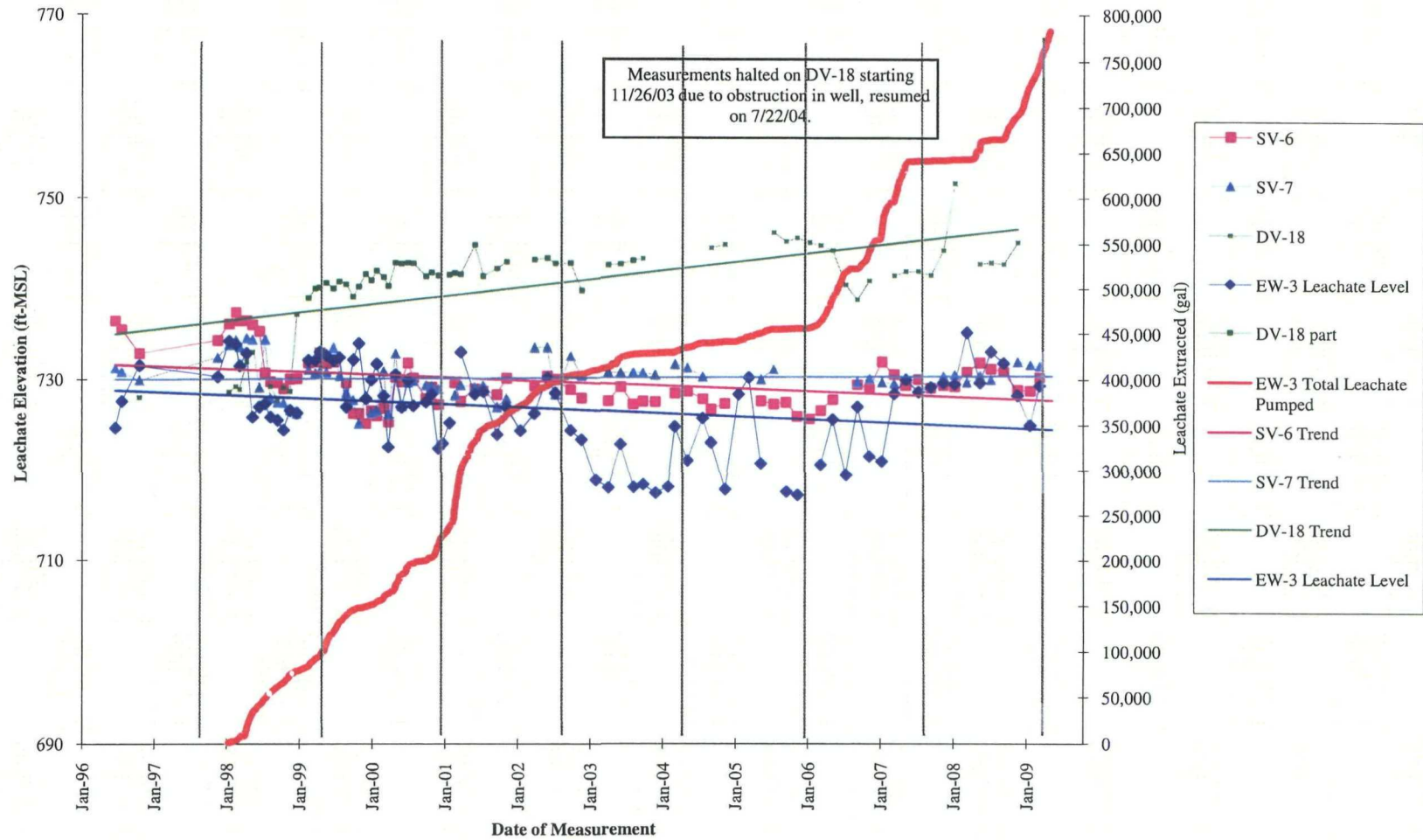
Drawing 3
Leachate Elevations in Landfill Area 3
Blackwell Landfill NPL Site



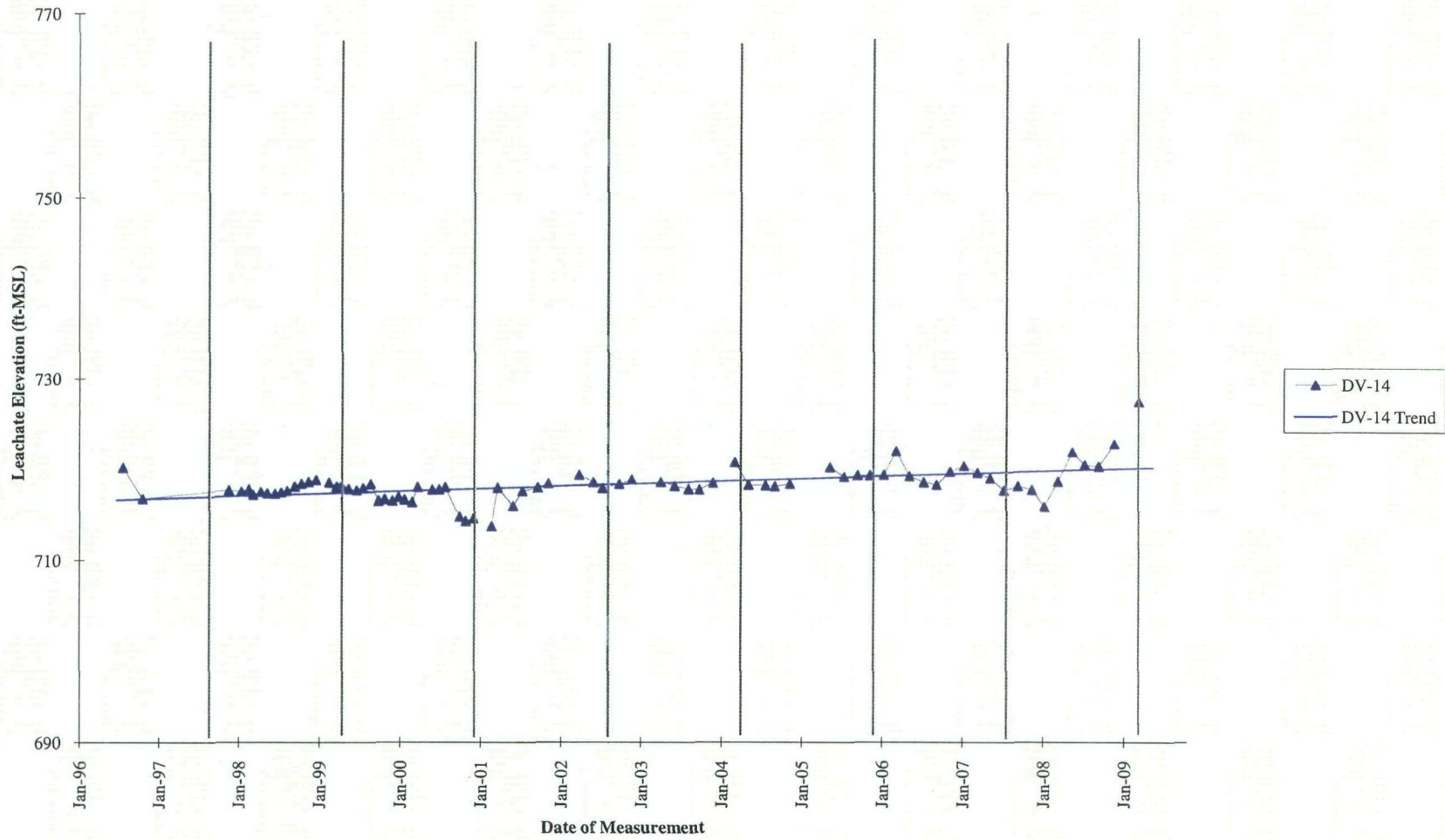
Drawing 4
Leachate Elevations in Landfill Area 4
Blackwell Landfill NPL Site



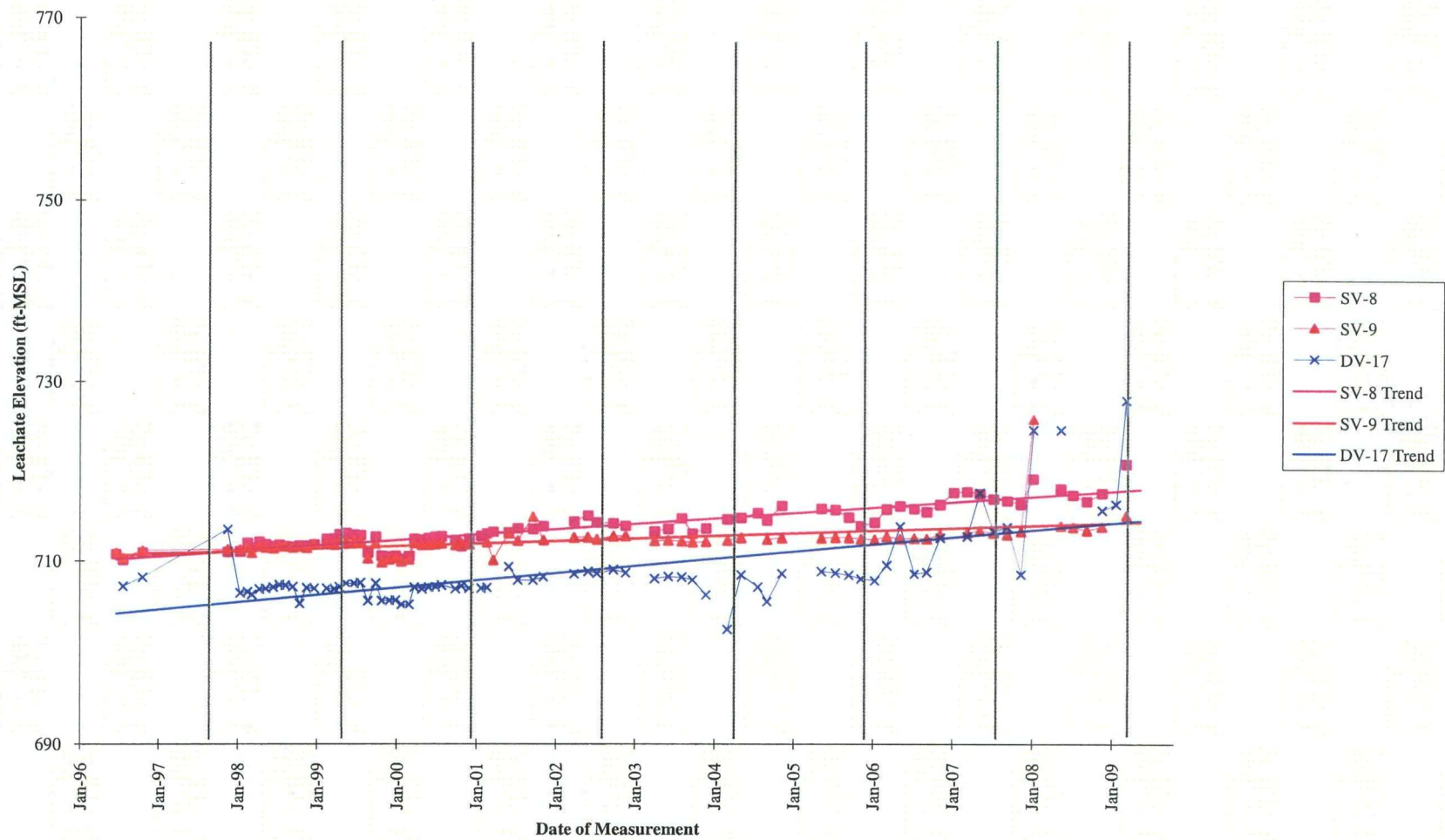
Drawing 5
Leachate Elevations in Landfill Area 5
Blackwell Landfill NPL Site



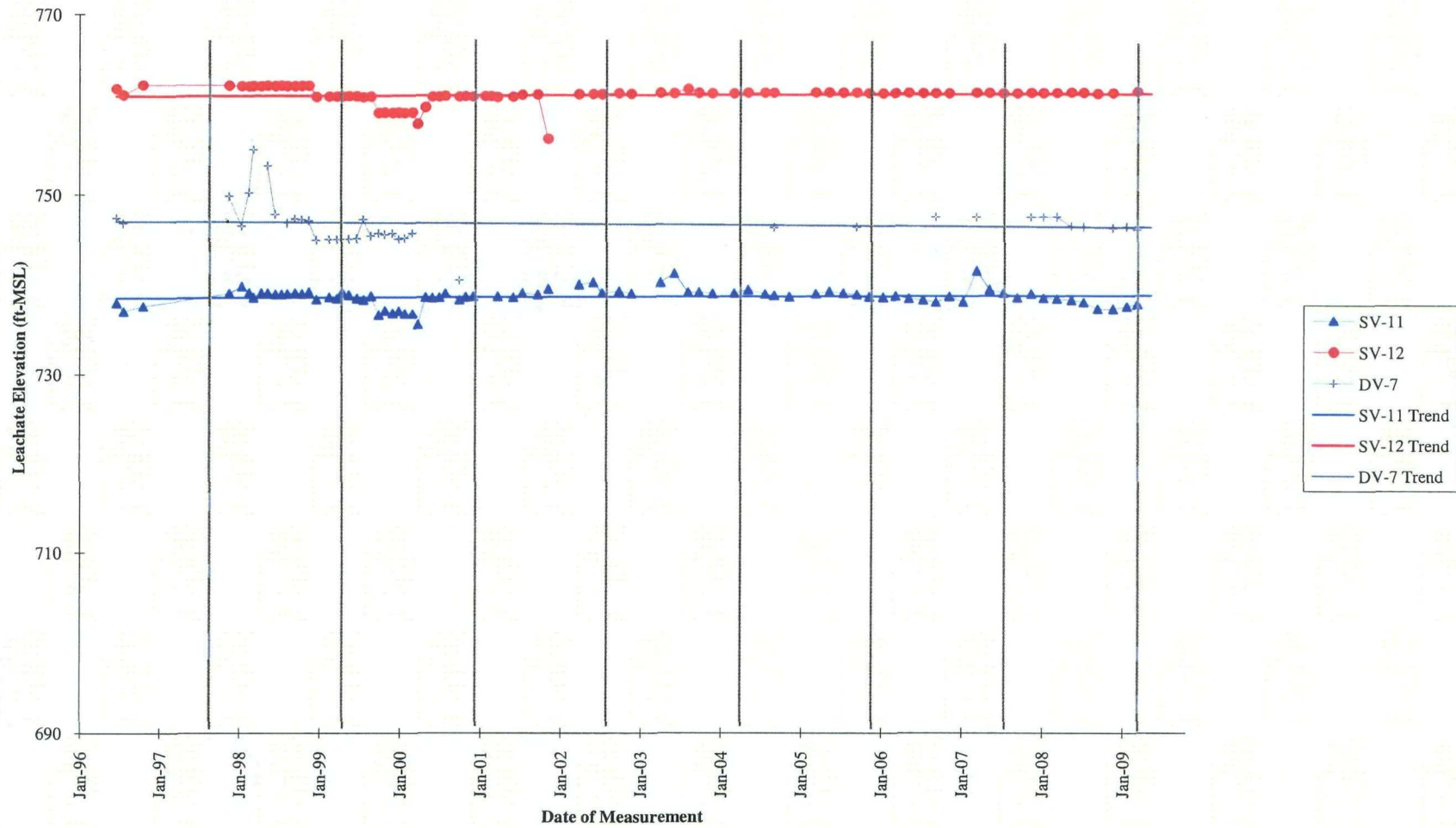
Drawing 6
Leachate Elevations in Landfill Area 6
Blackwell Landfill NPL Site



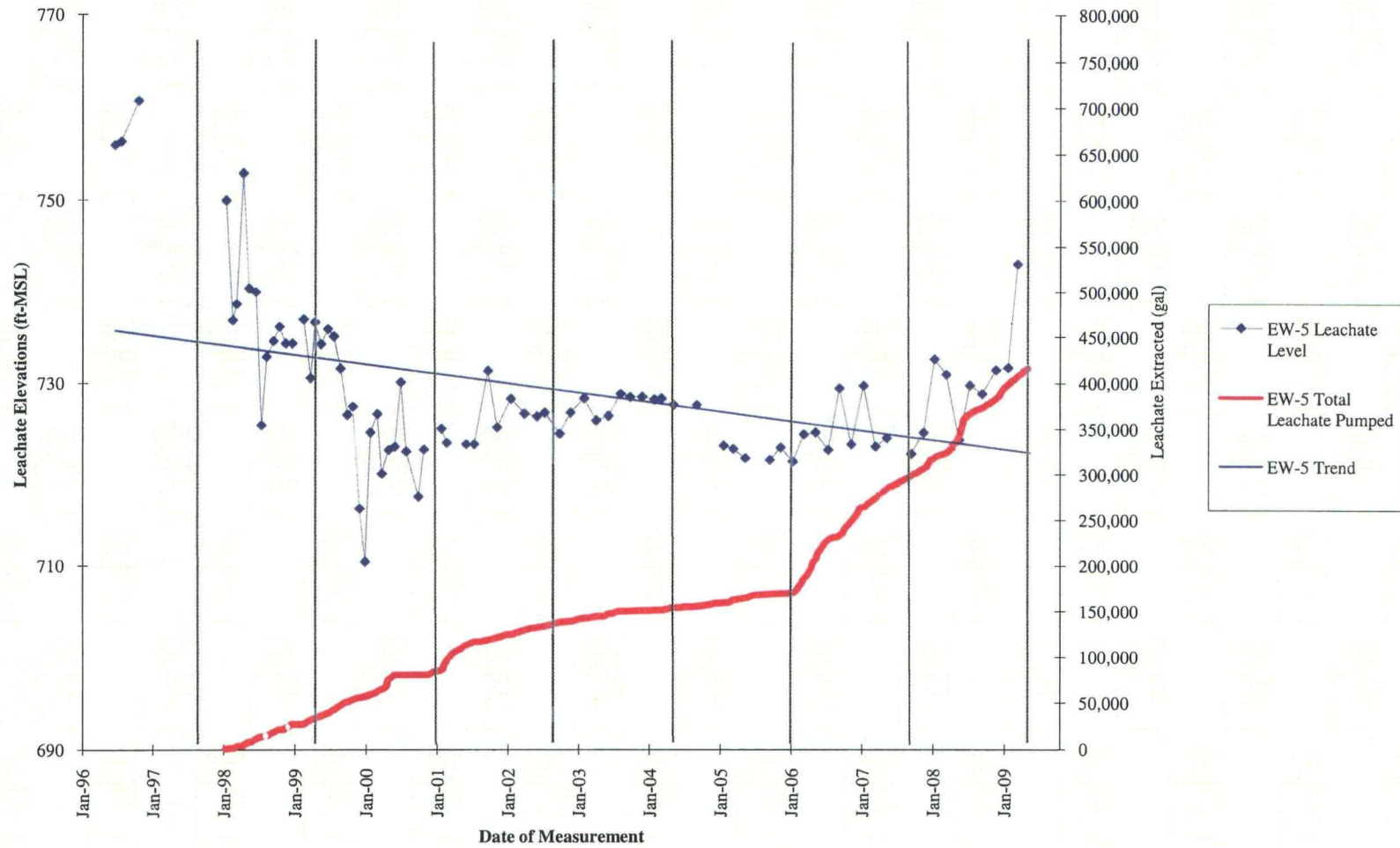
Drawing 7
Leachate Elevations in Landfill Area 7
Blackwell Landfill NPL Site



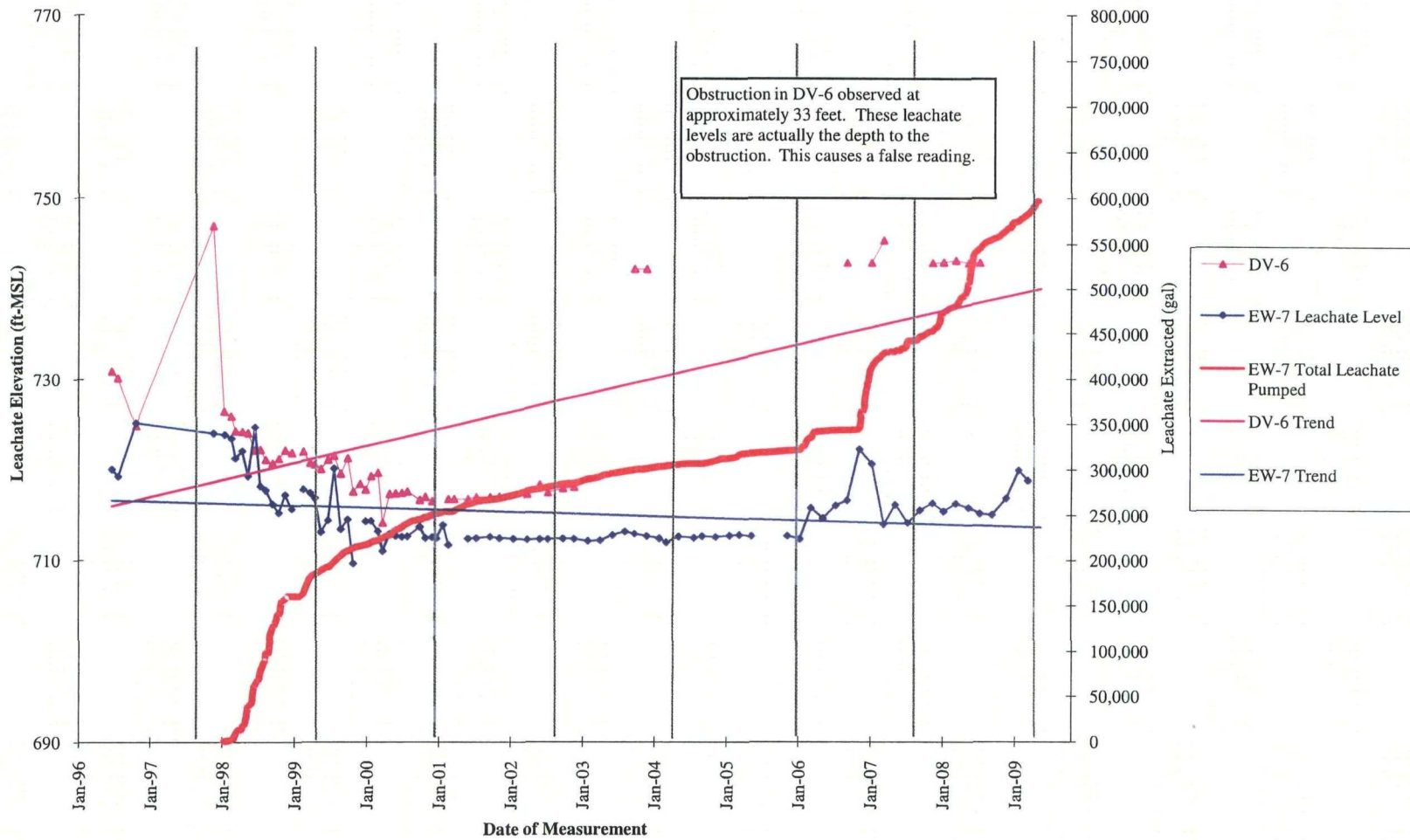
Drawing 8
Leachate Elevations in Landfill Area 8
Blackwell Landfill NPL Site



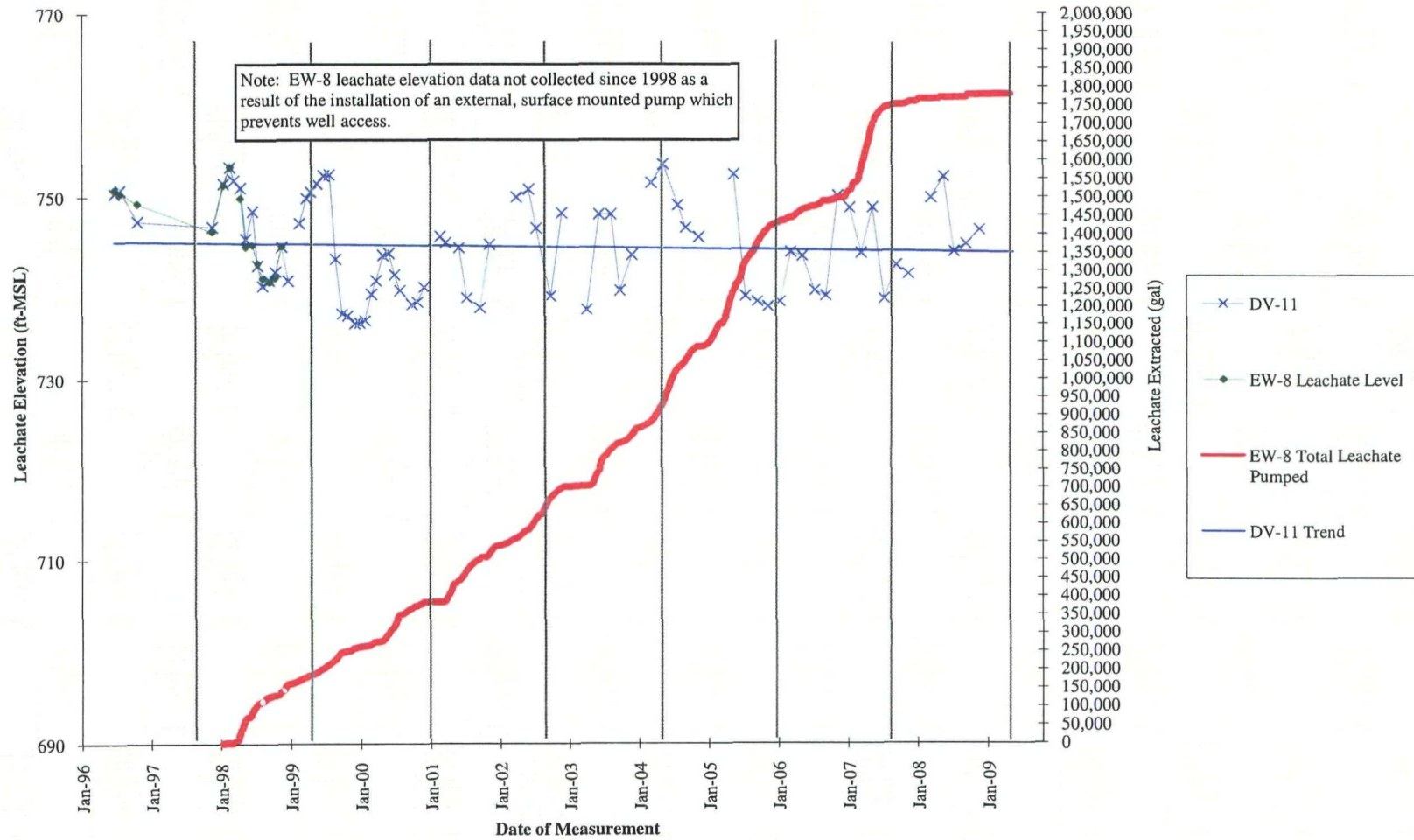
Drawing 9
Leachate Elevations in Landfill Area 9
Blackwell Landfill NPL Site



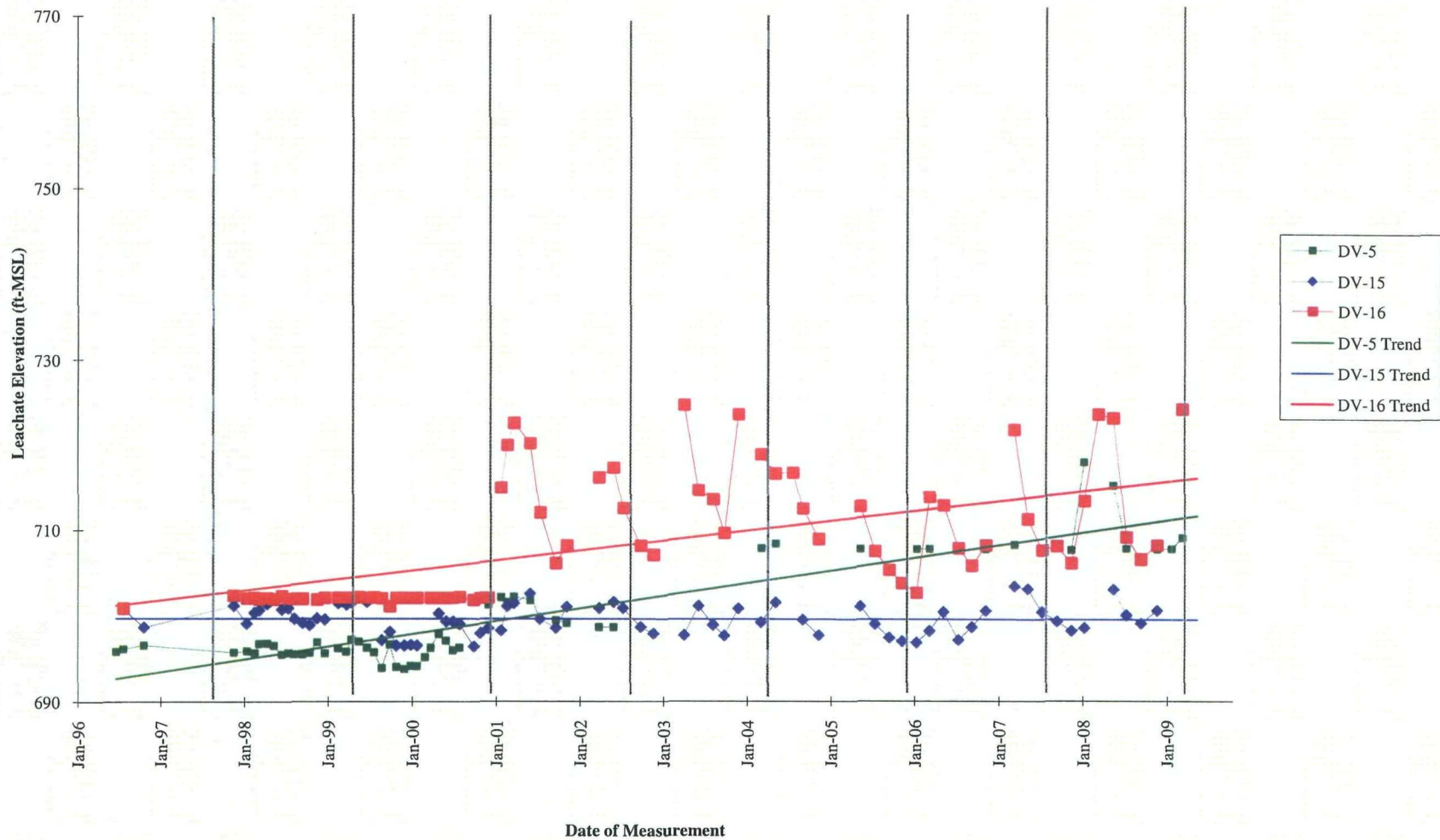
Drawing 10
Leachate Elevations in Landfill Area 10
Blackwell Landfill NPL Site



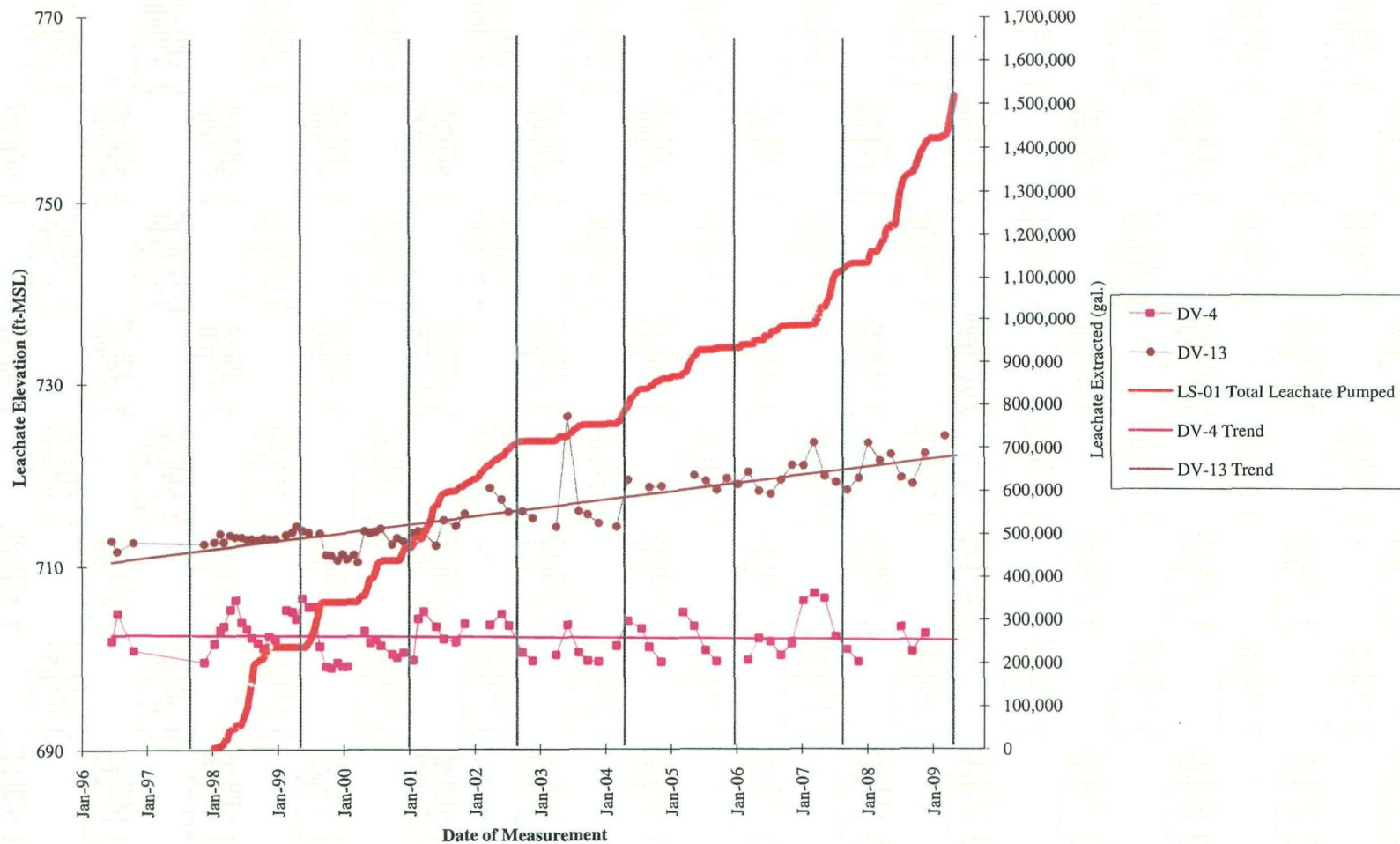
Drawing 11 **Leachate Elevations in Landfill Area 11** **Blackwell Landfill NPL Site**



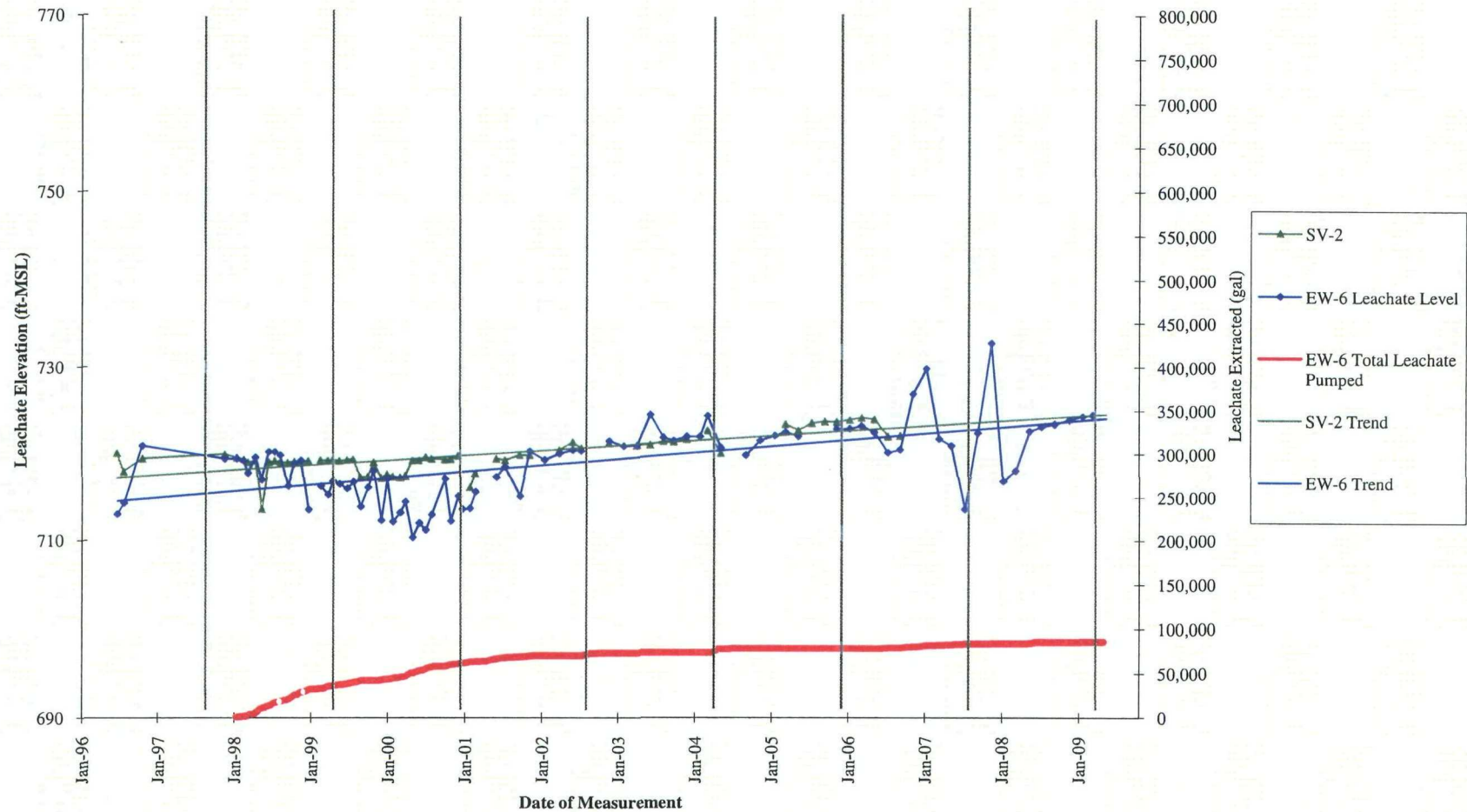
Drawing 12
Leachate Elevations in Landfill Area 12
Blackwell Landfill NPL Site



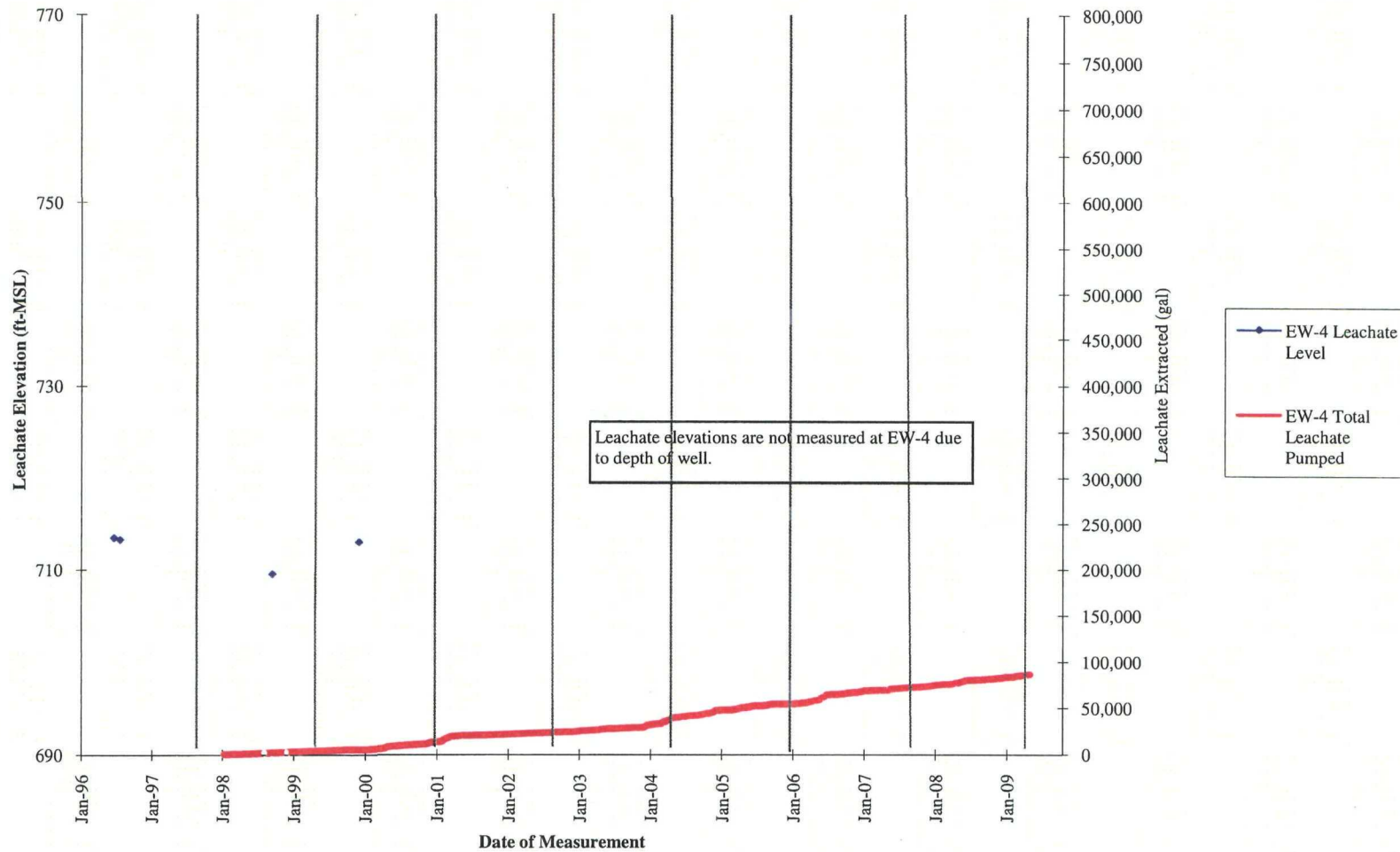
Drawing 13
Leachate Elevations in Landfill Area 13
Blackwell Landfill NPL Site



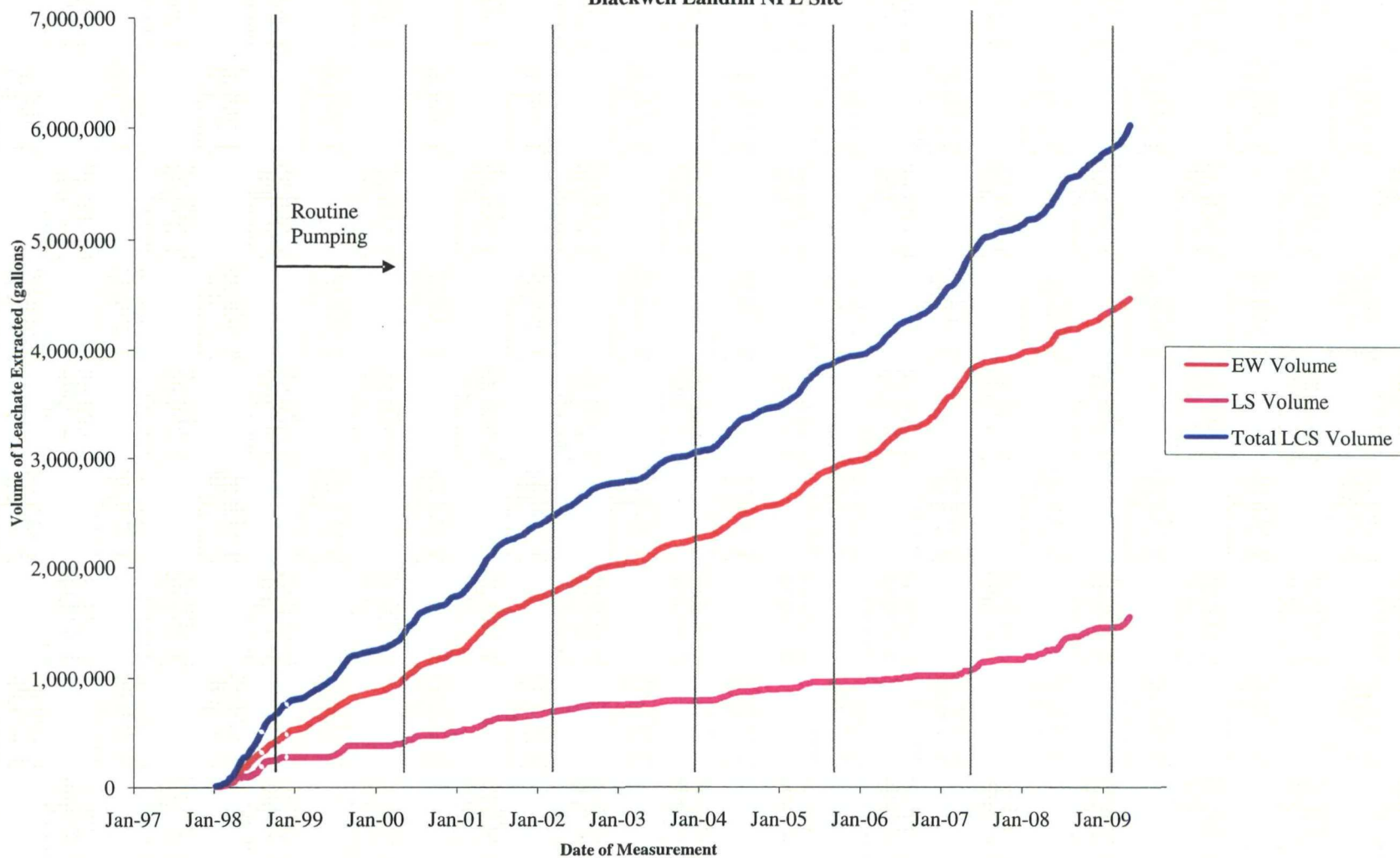
Drawing 14
Leachate Elevations in Landfill Area 14
Blackwell Landfill NPL Site



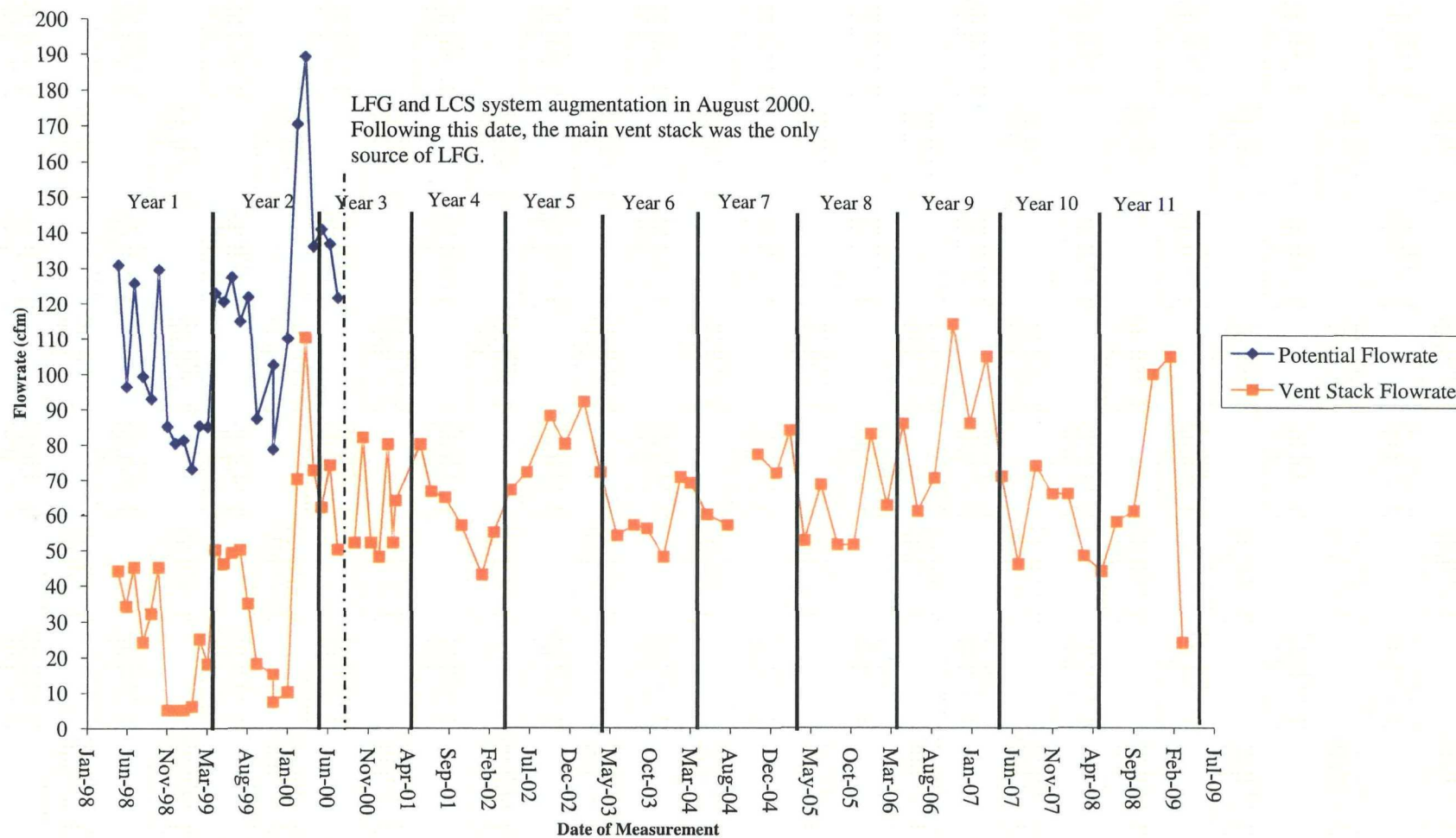
Drawing 15
Leachate Elevations in Landfill Area 15
Blackwell Landfill NPL Site



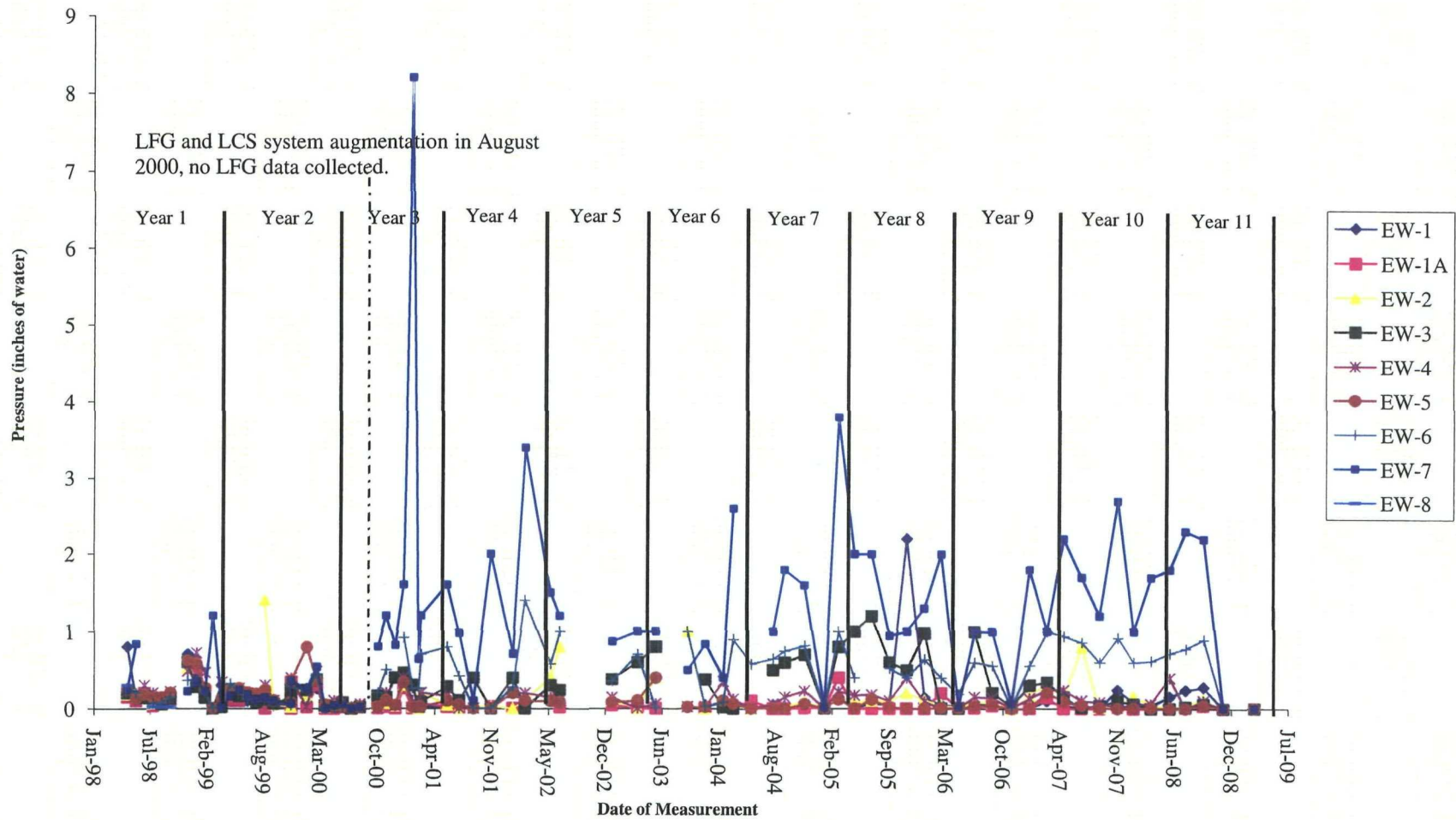
Drawing 16
Cumulative Leachate Pumping Volume
Blackwell Landfill NPL Site



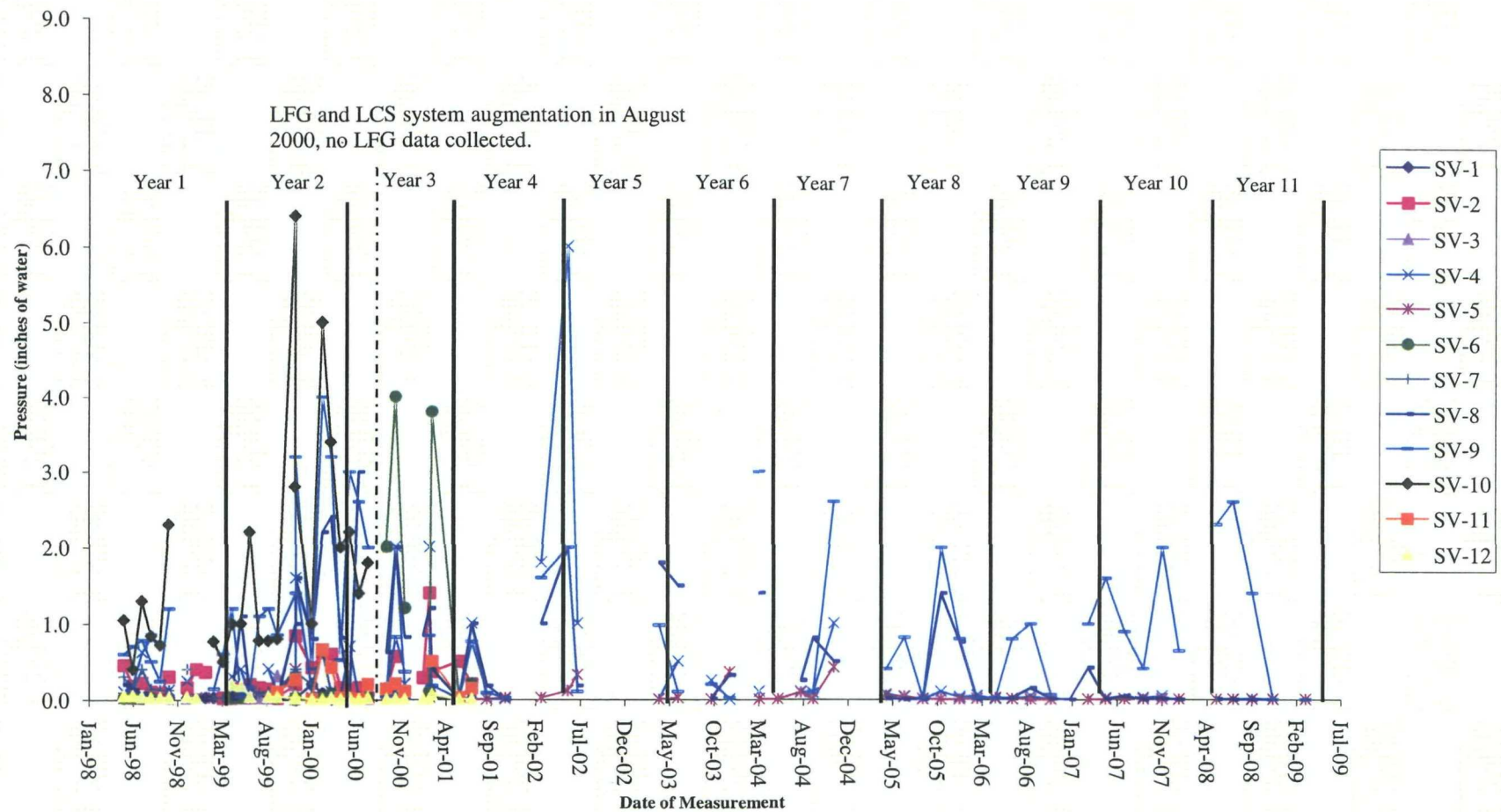
**Drawing 17
LFG Flowrate
Blackwell Landfill NPL Site**



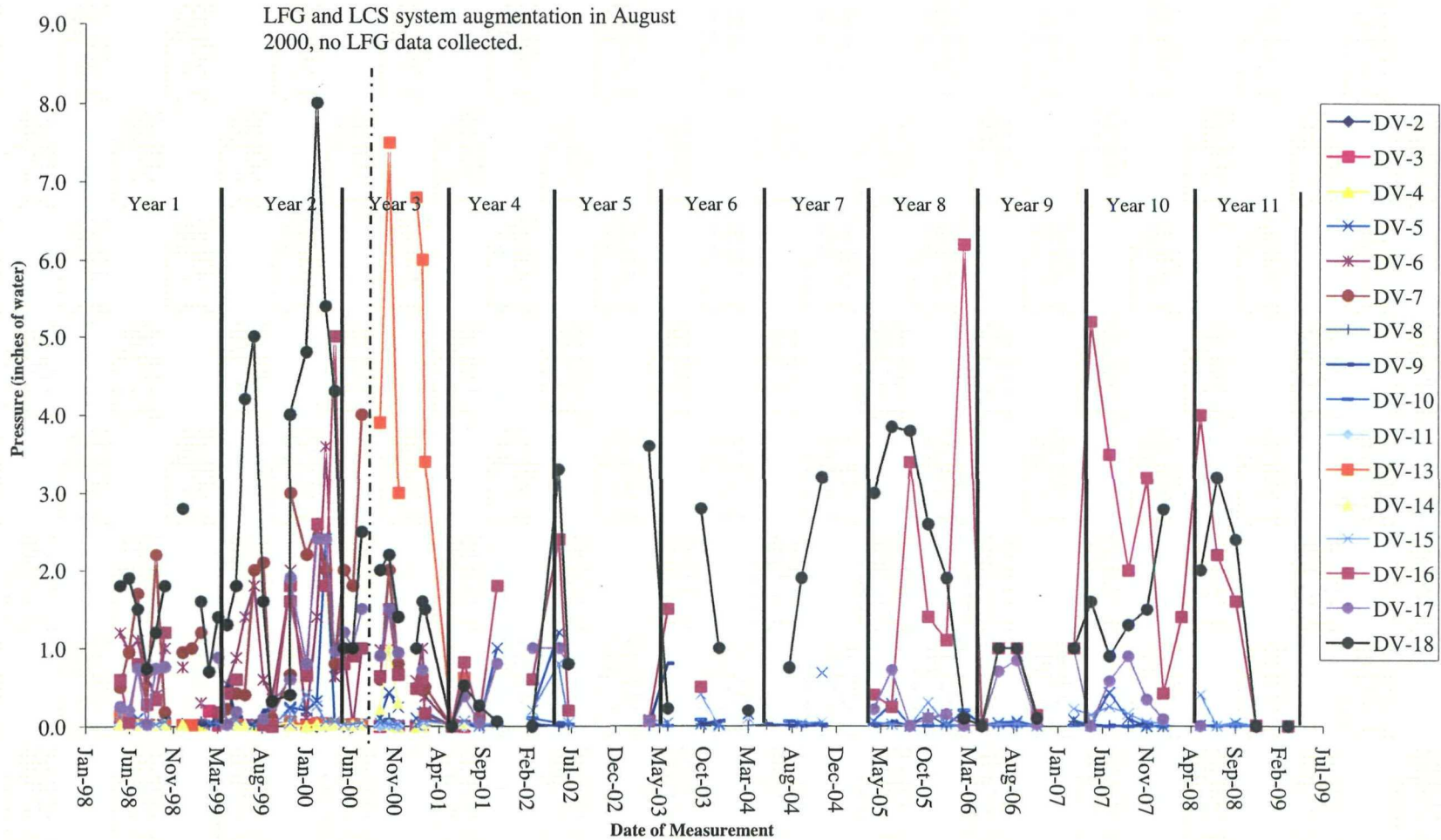
Drawing 18
Static LFG Pressure - Extraction Wells
Blackwell Landfill NPL Site



Drawing 19
Static LFG Pressures - Shallow Gas Vents
Blackwell Landfill NPL Site

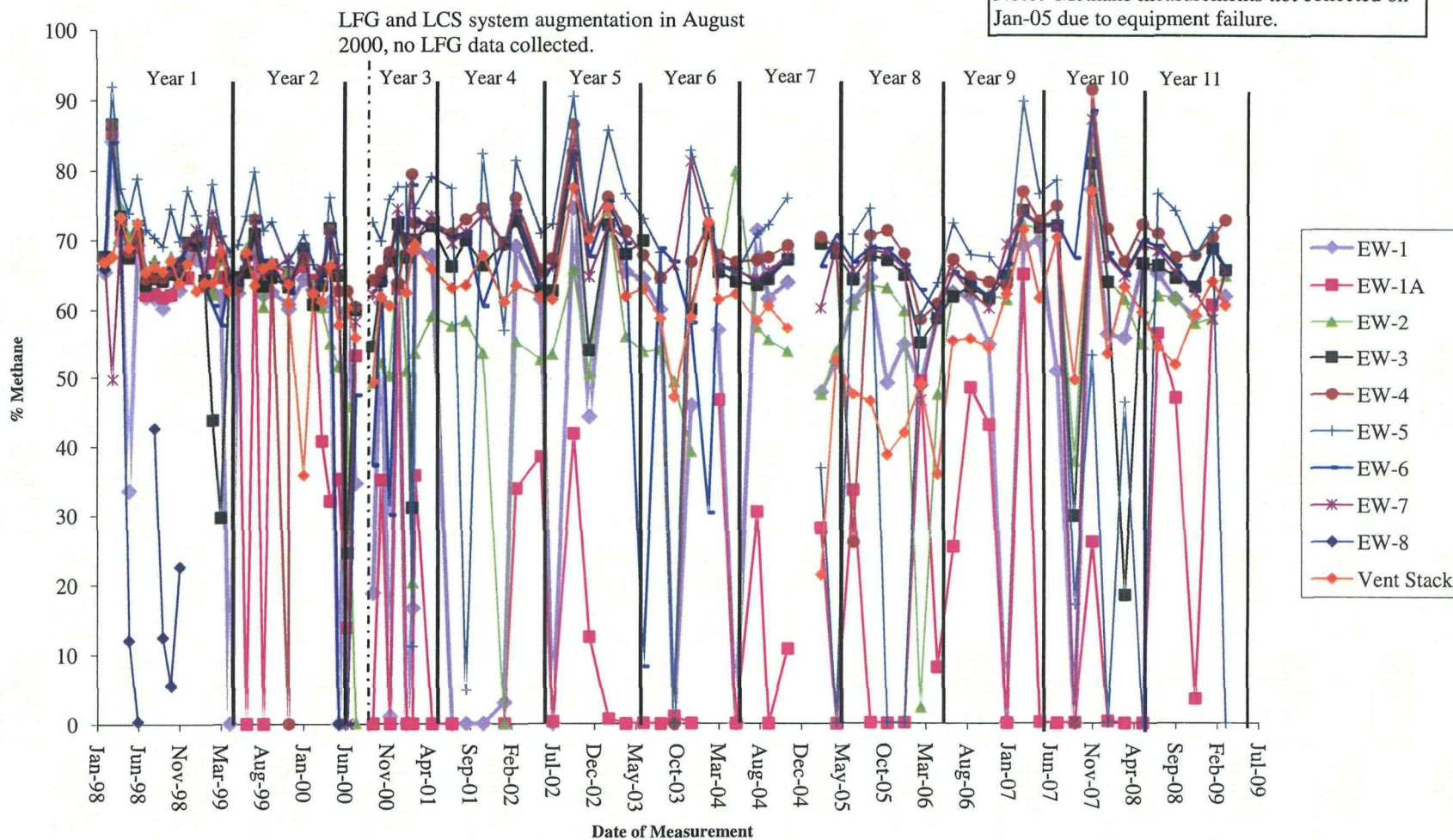


Drawing 20
Static LFG Pressures - Deep Gas Vents
Blackwell Landfill NPL Site

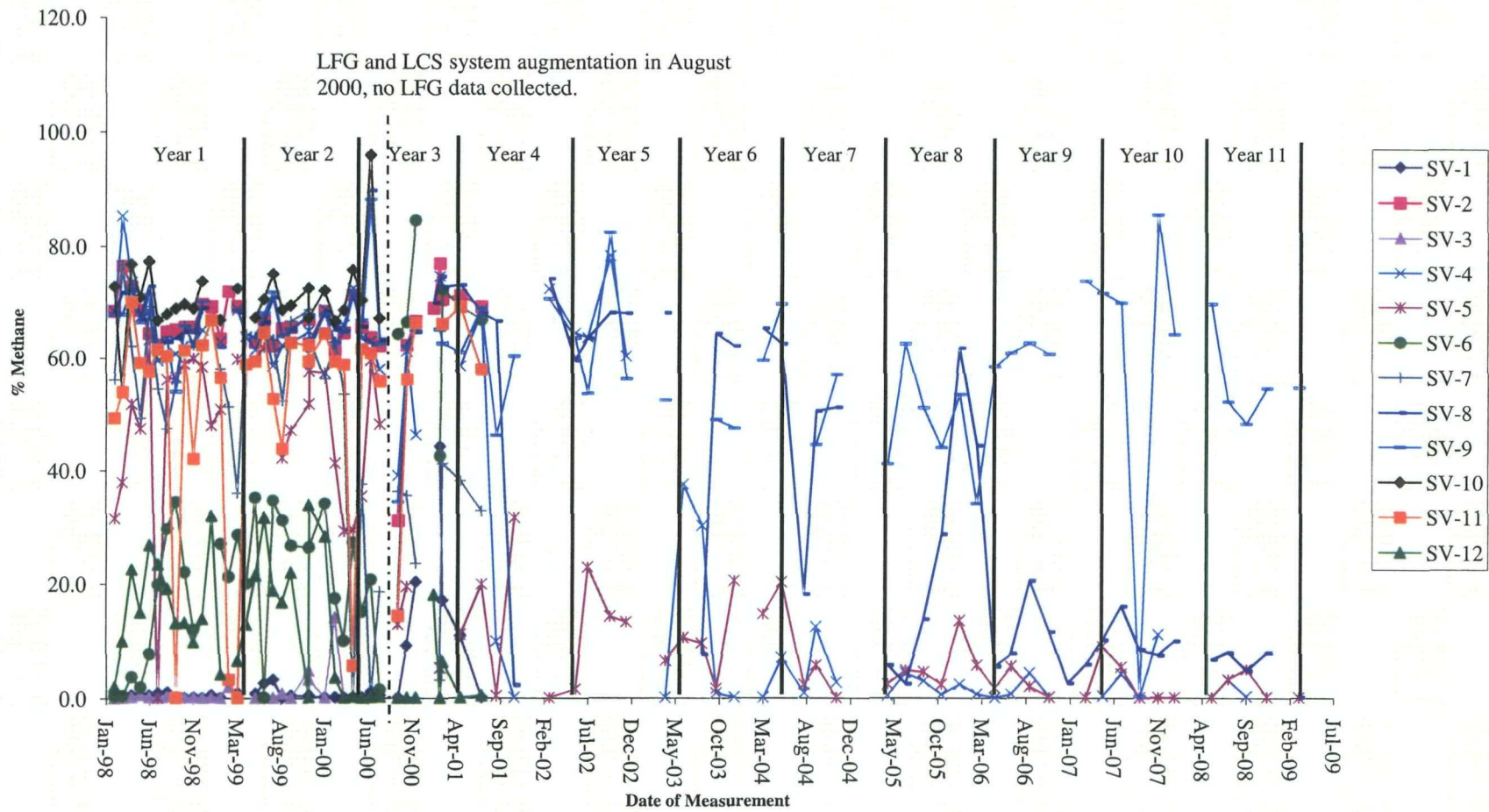


Drawing 21
Methane Content - Extraction Wells
Blackwell Landfill NPL Site

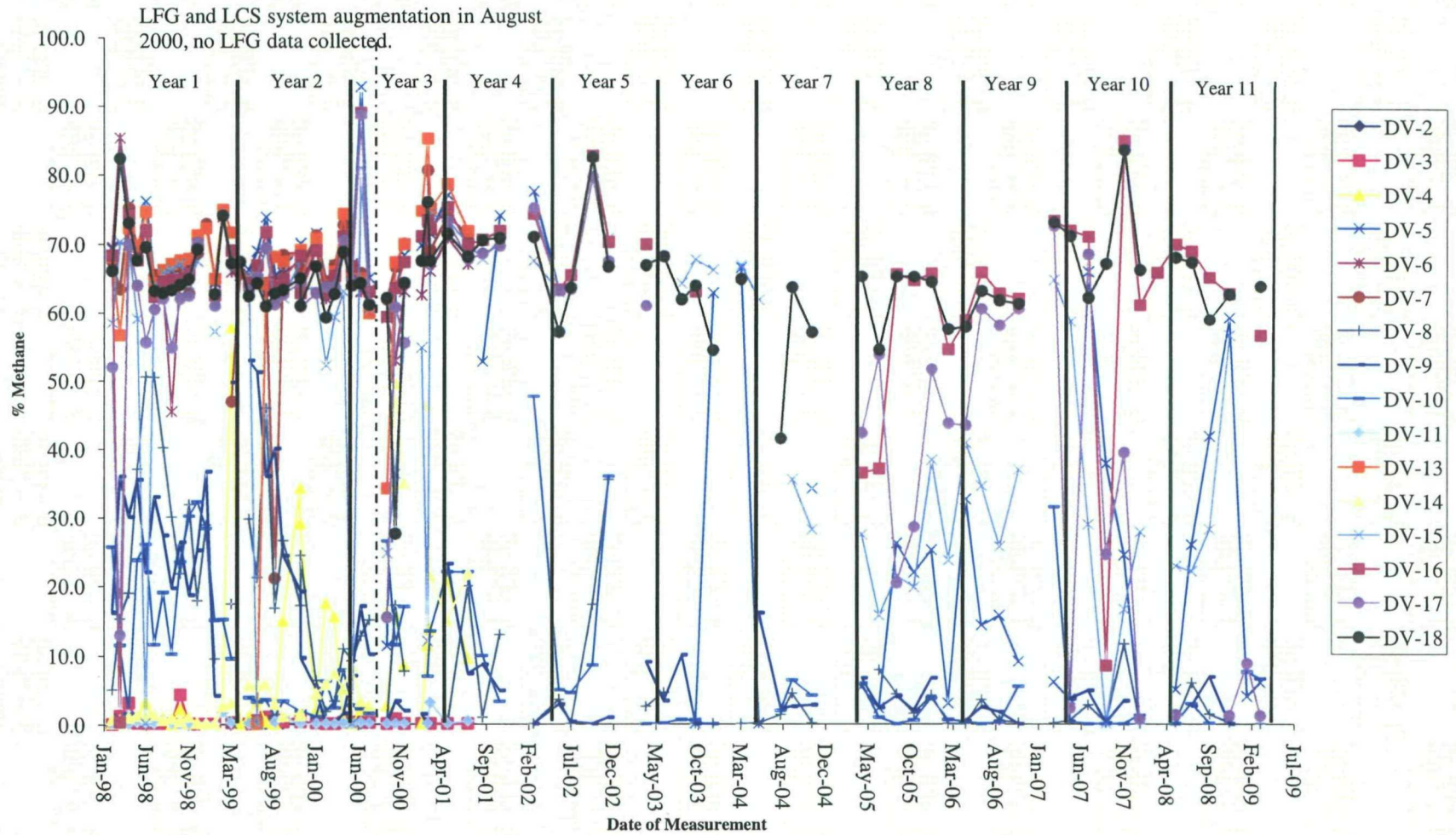
Note: Methane measurements not collected on Jan-05 due to equipment failure.



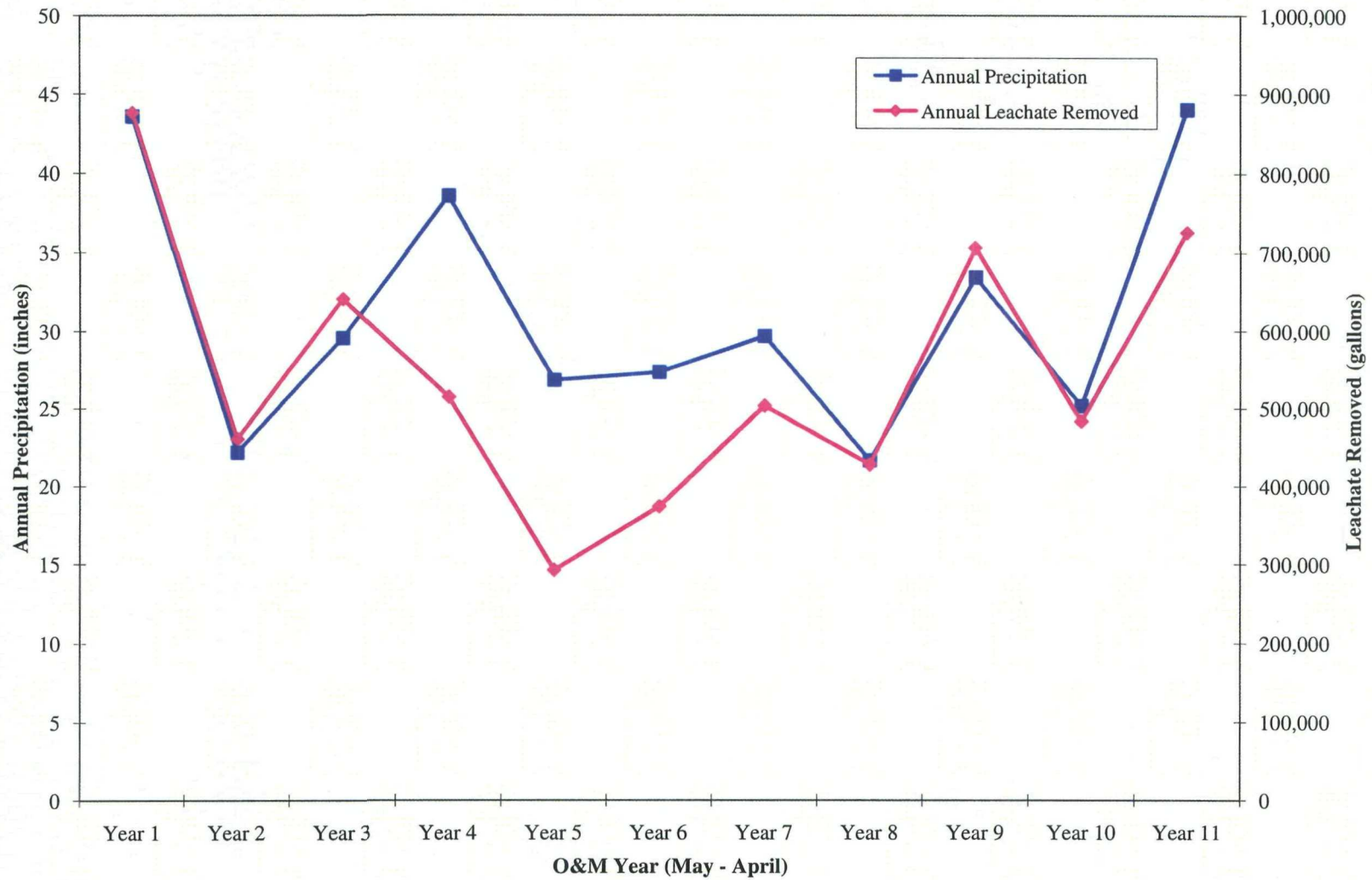
Drawing 22
Methane Content - Shallow Gas Vents
Blackwell Landfill NPL Site



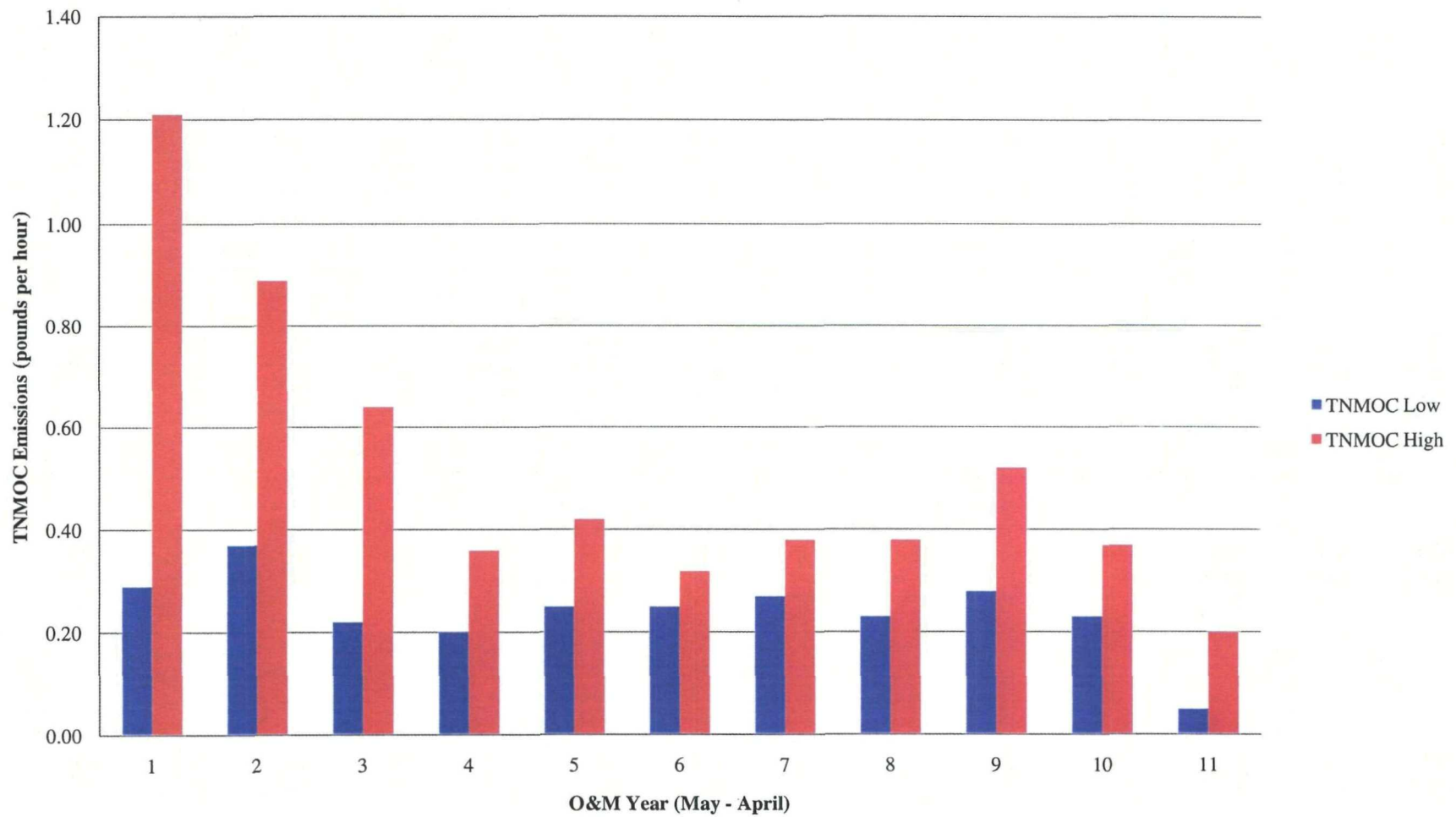
Drawing 23
Methane Content - Deep Gas Vents
Blackwell Landfill NPL Site



Drawing 24
Annual Precipitation vs. Leachate Removed
Blackwell Landfill NPL Site



Drawing 25
Range of TNMOC Emissions per Year of Operation
Blackwell Landfill NPL Site



APPENDICES

APPENDIX A

INSPECTION, MAINTENANCE, MONITORING AND DISPOSAL LOGS

- A-1: Site Visit Operating Logs**
- A-2: Inspection Report Forms**
- A-3: Maintenance and Repair Record Forms**
- A-4: Leachate Disposal Logs**
- A-5: Landfill Gas Vent Monitoring Forms**

APPENDIX A-1

Site Visit Operating Logs



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/9/08

Time	LCS System	Remarks (Reason for System on or off)
3:30	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>76864</u>			<u>143</u>
EW01A	<u>492556</u>			<u>147</u>
EW02	<u>2182216</u>			<u>149</u>
EW03	<u>3093446</u>			<u>155</u>
EW04	<u>122284</u>			<u>271</u>
EW05	<u>1909671</u>			<u>3001</u>
EW06	<u>337572</u>			<u>33</u>
EW07	<u>1633892</u>			<u>4886</u>
EW08	<u>34355349</u>			<u>0</u>
LS01	<u>6889131</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

JA1252008\00805d64.doc 1252008.058101

REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 5/12/08

Time	LCS System	Remarks (Reason for System on or off)
830	<u>(On)</u> or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>77007</u>			<u>85</u>
EW01A	<u>492703</u>			<u>68</u>
EW02	<u>2182365</u>			<u>1762</u>
EW03	<u>3093601</u>			<u>10175</u>
EW04	<u>727555</u>			<u>66</u>
EW05	<u>1412622</u>			<u>799</u>
EW06	<u>337605</u>			<u>12</u>
EW07	<u>1638778</u>			<u>0</u>
EW08	<u>34355348</u>			<u>0</u>
LS01	<u>688913</u>			<u>5218</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off AC + C

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 5/14/08

Time	LCS System	Remarks (Reason for System on or off)
830	<u>On</u> or Off	SW. PP = 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>7282</u>			<u>43</u>
EW01A	<u>492771</u>			<u>76</u>
EW02	<u>2184127</u>			<u>1873</u>
EW03	<u>3103776</u>			<u>4048</u>
EW04	<u>227621</u>			<u>142</u>
EW05	<u>1413471</u>			<u>993</u>
EW06	<u>337617</u>			<u>6</u>
EW07	<u>1638778</u>			<u>1</u>
EW08	<u>34355348</u>			<u>1</u>
LS01	<u>6894349</u>			<u>3593</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 70

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off

AKC

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one)

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 5/16/08

Time	LCS System	Remarks (Reason for System on or off)
830	<input checked="" type="radio"/> On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>77135</u>			<u>132</u>
EW01A	<u>492847</u>			<u>162</u>
EW02	<u>2186000</u>			<u>2359</u>
EW03	<u>3107324</u>			<u>155</u>
EW04	<u>727763</u>			<u>260</u>
EW05	<u>1414464</u>			<u>2311</u>
EW06	<u>337623</u>			<u>19</u>
EW07	<u>1638779</u>			<u>6887</u>
EW08	<u>34355349</u>			<u>0</u>
LS01	<u>6897942</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

70

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On

Off

Act 3

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/19/08

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>77267</u>			<u>108</u>
EW01A	<u>493009</u>			<u>120</u>
EW02	<u>2188359</u>			<u>630</u>
EW03	<u>3107979</u>			<u>138</u>
EW04	<u>728023</u>			<u>61</u>
EW05	<u>1416775</u>			<u>1016</u>
EW06	<u>337642</u>			<u>0</u>
EW07	<u>1645666</u>			<u>1723</u>
EW08	<u>34355349</u>			<u>0</u>
LS01	<u>6897942</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

70

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off

Auto

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/21/08

Time	LCS System	Remarks (Reason for System on or off)
745	On or Off	SHIPPED 8500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	77375			87
EW01A	493129			116
EW02	2188981			1100
EW03	3168117			124
EW04	728084			96
EW05	1417791			1266
EW06	337642			26
EW07	1647389			2745
EW08	34355349			0
LS01	6897942			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/23/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 9000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	77462			135
EW01A	493245			165
EW02	2190081			1619
EW03	3108246			142
EW04	728180			209
EW05	1419057			1535
EW06	337668			607
EW07	1650134			3868
EW08	34355349			0
LS01	6897942			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DEW

Date: 5/28/08

Time	LCS System	Remarks (Reason for System on or off)
8:10 AM	On or <u>Off</u>	SHIPPED 18,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>77597</u>			
EW01A	<u>493410</u>			
EW02	<u>2191700</u>			
EW03	<u>3108388</u>			
EW04	<u>728389</u>			
EW05	<u>1420592</u>			
EW06	<u>338275</u>			
EW07	<u>1654002</u>			
EW08	<u>34355349</u>			
LS01	<u>6897942</u>			
LS02				

145
157
1903
133
105
1648
17
2763
0
0

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

_____**If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.****II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

**SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE**

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 5/30/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 8800
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	77742			144
EW01A	493567			158
EW02	2193603			1159
EW03	3108521			153
EW04	728494			125
EW05	1422240			1463
EW06	338292			17
EW07	1656765			2574
EW08	34355349			0
LS01	6897942			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By:

RAY

Date:

6/2/08

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	77886			135
EW01A	493725			182
EW02	2194762			1313
EW03	3108674			140
EW04	728619			154
EW05	1423703			1744
EW06	338309			38
EW07	1659339			384
EW08	34355349			0
LS01	6897942			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/4/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 5800
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	78021			126
EW01A	493907			122
EW02	2196075			1773
EW03	3108814			147
EW04	728773			225
EW05	1425447			1687
EW06	338337			105
EW07	1659723			3861
EW08	34355349			0
LS01	6847942			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 6/6/08

Time	LCS System	Remarks (Reason for System on or off)
815	<input checked="" type="radio"/> On or Off	SHIPPED 9000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	78147			63
EW01A	494029			73
EW02	2197848			482
EW03	3108961			82
EW04	728998			29
EW05	1427134			1010
EW06	338442			126
EW07	1663584			1011
EW08	34355349			0
LS01	6897942			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/9/08

Time	LCS System	Remarks (Reason for System on or off)
835	On or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	78210			243
EW01A	494102			282
EW02	2198330			497
EW03	3109043			134
EW04	729027			59
EW05	1428144			656
EW06	338568			15
EW07	1664595			630
EW08	34355349			0
LS01	6897942			19600
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 6/11/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 9500
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	28453			170
EW01A	494384			149
EW02	2198827			948
EW03	3109177			141
EW04	729086			112
EW05	1428800			897
EW06	338583			0
EW07	1665225			1576
EW08	34355349			0
LS01	6917542			21024
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

**SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE**

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/13/08

Time	LCS System	Remarks (Reason for System on or off)
845	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	78623			161
EW01A	494533			148
EW02	2199775			918
EW03	3109318			146
EW04	729195			125
EW05	1429697			998
EW06	338583			22
EW07	1666801			1268
EW08	34355349			0
LS01	6938566			20679
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/16/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	78784			178
EW01A	494681			18
EW02	2200693			1073
EW03	3109464			169
EW04	729320			147
EW05	1430695			1127
EW06	338605			31
EW07	1668069			1238
EW08	34355349			0
LS01	6959245			19471
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/20/08

Time	LCS System	Remarks (Reason for System on or off)
845	<u>On</u> or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>78958</u>			<u>134</u>
EW01A	<u>494866</u>			<u>151</u>
EW02	<u>2201766</u>			<u>1491</u>
EW03	<u>3109633</u>			<u>150</u>
EW04	<u>729467</u>			<u>186</u>
EW05	<u>1431822</u>			<u>1556</u>
EW06	<u>338636</u>			<u>32</u>
EW07	<u>1669307</u>			<u>1415</u>
EW08	<u>34355349</u>			<u>0</u>
LS01	<u>6928716</u>			<u>18174</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 6/23/08

Time	LCS System	Remarks (Reason for System on or off)
830	<input checked="" type="radio"/> On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	79092			145
EW01A	495017			153
EW02	2263257			1249
EW03	3109783			132
EW04	729653			144
EW05	1433378			962
EW06	338668			33
EW07	1670722			1126
EW08	34355349			0
LS01	6996890			19608
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/25/08

Time	LCS System	Remarks (Reason for System on or off)
7.30	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	
EW01	79237				146
EW01A	495170				134
EW02	2204566				1106
EW03	3109915				94
EW04	729797				123
EW05	1434340				1450
EW06	338701				73
EW07	1671848				1917
EW08	34355349				0
LS01	7016498				2534
LS02					

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/27/08

Time	LCS System	Remarks (Reason for System on or off)
8:30	On or Off	Shipped 39,800
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	79383			~135
EW01A	495304			150
EW02	2205615			968
EW03	3110009			139
EW04	729920			129
EW05	1435790			1481
EW06	338774			37
EW07	1673765			2092
EW08	34355349			0
LS01	7041812			26770
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

72

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off

• General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/1/08

Time	LCS System	Remarks (Reason for System on or off)
830A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	79518			124
EW01A	495454			170
EW02	2206583			1417
EW03	3110148			1925
EW04	730049			186
EW05	1437271			1811
EW06	338811			167
EW07	1675857			2925
EW08	34355349			0
LS01	7068582			2582
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space Satisfactory Unsatisfactory
Leak Detection Riser Satisfactory Unsatisfactory
Tank High Level (75%) Satisfactory Unsatisfactory
Tank High Level (90%) Satisfactory Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection Satisfactory Unsatisfactory
High Level Satisfactory Unsatisfactory
Air Dryer Satisfactory Unsatisfactory
Compressor Satisfactory Unsatisfactory

Building Inside Temperature (°F): 78 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.

II: Landfill Gas (LFG) Venting System

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISION



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/3/08

Time	LCS System	Remarks (Reason for System on or off)
830	<u>On</u> or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>79642</u>			<u>166</u>
EW01A	<u>495624</u>			<u>142</u>
EW02	<u>2208000</u>			<u>951</u>
EW03	<u>3112073</u>			<u>157</u>
EW04	<u>730235</u>			<u>122</u>
EW05	<u>1439082</u>			<u>1166</u>
EW06	<u>338978</u>			<u>26</u>
EW07	<u>167882</u>			<u>1818</u>
EW08	<u>34355349</u>			<u>0</u>
LS01	<u>7094403</u>			<u>29117</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space Satisfactory Unsatisfactory
Leak Detection Riser Satisfactory Unsatisfactory
Tank High Level (75%) Satisfactory Unsatisfactory
Tank High Level (90%) Satisfactory Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection Satisfactory Unsatisfactory
High Level Satisfactory Unsatisfactory
Air Dryer Satisfactory Unsatisfactory
Compressor Satisfactory Unsatisfactory

Building Inside Temperature (°F): 75 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISION



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/7/08

Time	LCS System	Remarks (Reason for System on or off)
7:00 A	On or <input checked="" type="radio"/> Off	OFF FOR mwh o+m
	On or <input checked="" type="radio"/> Off	SHIPPED 10,000
7/9/08 2:15	<input checked="" type="radio"/> On or Off	System ON
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>79808</u>			<u>1222</u>
EW01A	<u>495766</u>			<u>115</u>
EW02	<u>2208951</u>			<u>1868</u>
EW03	<u>3112230</u>			<u>29</u>
EW04	<u>730361</u>			<u>254</u>
EW05	<u>1440248</u>			<u>1712</u>
EW06	<u>339004</u>			<u>32</u>
EW07	<u>1688600</u>			<u>457</u>
EW08	<u>34355349</u>			<u>163</u>
LS01	<u>7123520</u>			<u>23326</u>
LS02				

LCS Holding Tank:

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

<u>Alarm Panel Alarms</u>	<u>Status (Circle One)</u>		<u>If Unsatisfactory, Explain</u>
Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

<u>Interlock Alarms</u>	<u>Status (Circle One)</u>		<u>If Unsatisfactory, Explain</u>
Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.

II: Landfill Gas (LFG) Venting System

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/11/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 600
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80030			143
EW01A	495881			128
EW02	2210819			831
EW03	3112259			188
EW04	730615			101
EW05	1441960			1546
EW06	339036			23
EW07	1681057			3432
EW08	34355512			403
LS01	7146826			2198
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space Satisfactory Unsatisfactory
Leak Detection Riser Satisfactory Unsatisfactory
Tank High Level (75%) Satisfactory Unsatisfactory
Tank High Level (90%) Satisfactory Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection Satisfactory Unsatisfactory
High Level Satisfactory Unsatisfactory
Air Dryer Satisfactory Unsatisfactory
Compressor Satisfactory Unsatisfactory

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off OFF

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISION



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/14/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80173			82
EW01A	496009			61
EW02	2211650			1190
EW03	3112447			93
EW04	730716			167
EW05	1443506			1565
EW06	339059			24
EW07	1684489			2406
EW08	34355915			49
LS01	7168681			1682
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 75

Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one):

On

Off

Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/16/08

Time	LCS System	Remarks (Reason for System on or off)
830	<u>On</u> or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>80255</u>			<u>154</u>
EW01A	<u>496170</u>			<u>158</u>
EW02	<u>2212840</u>			<u>1863</u>
EW03	<u>3112540</u>			<u>139</u>
EW04	<u>730883</u>			<u>268</u>
EW05	<u>1445071</u>			<u>2840</u>
EW06	<u>339083</u>			<u>20</u>
EW07	<u>1686895</u>			<u>3889</u>
EW08	<u>34355964</u>			<u>418</u>
LS01	<u>7185507</u>			<u>538</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 78 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WOB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/21/08

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 8500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80409			77
EW01A	496328			12
EW02	2214703			784
EW03	3112679			68
EW04	731151			226
EW05	1447911			2016
EW06	339103			26
EW07	1693006			4046
EW08	34356382			86
LS01	7266045			11094
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 80

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/24/08

Time	LCS System	Remarks (Reason for System on or off)
830	<u>On</u> or Off	Shipped 3550
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>80486</u>			<u>71</u>
EW01A	<u>496400</u>			<u>83</u>
EW02	<u>2215487</u>			<u>2774</u>
EW03	<u>3112747</u>			<u>72</u>
EW04	<u>731377</u>			<u>299</u>
EW05	<u>1449927</u>			<u>3344</u>
EW06	<u>339129</u>			<u>10</u>
EW07	<u>1697052</u>			<u>5730</u>
EW08	<u>34356468</u>			<u>174</u>
LS01	<u>7217139</u>			<u>15629</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

77

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off

AUTO

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 7/31/08

Time	LCS System	Remarks (Reason for System on or off)
830	(On) or Off	Shipped 5800
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80557			77
EW01A	496483			64
EW02	2218261			1788
EW03	3112819			80
EW04	731676			267
EW05	1453271			3031
EW06	339139			2
EW07	1702782			3199
EW08	34356642			205
LS01	7232768			15108
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/7/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 5900
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80634			73
EW01A	496547			121
EW02	2220049			2578
EW03	3112899			23
EW04	731943			418
EW05	1456302			3721
EW06	3391141			32
EW07	1705981			4846
EW08	34356847			182
LS01	7247876			11016
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

75

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off

Auto

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 8/14/08

Time	LCS System	Remarks (Reason for System on or off)
815	<input checked="" type="radio"/> On or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80707			59
EW01A	496668			73
EW02	2222559			1914
EW03	3112922			61
EW04	732361			343
EW05	1460073			2639
EW06	339173			11
EW07	1710827			5214
EW08	34357029			148
LS01	7258892			8465
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 76 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off NOT

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/21/08

Time	LCS System	Remarks (Reason for System on or off)
700 Am	On or Off	SHIPPED 3000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	80766			2050
EW01A	496741			133
EW02	2224473			3600
EW03	3112983			210
EW04	732704			698
EW05	1462712			6786
EW06	339184			0
EW07	1716041			6212
EW08	34357177			232
LS01	7267357			11987
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 78

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off

AUTO

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISION



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 9/4/08

Time	LCS System	Remarks (Reason for System on or off)
930	On or Off	Shipped 5500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	82816			301
EW01A	496874			230
EW02	2228073			1439
EW03	3113193			1916
EW04	733402			324
EW05	1469498			2769
EW06	339184			0
EW07	1722253			2489
EW08	34357409			166
LS01	7279344			5098
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 78 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.

II: Landfill Gas (LFG) Venting System

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISION



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 9/11/08

Time	LCS System	Remarks (Reason for System on or off)
830	<input checked="" type="radio"/> On or Off	SHIPPED 3800
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	83117			1264
EW01A	497104			3
EW02	2229512			411
EW03	3115109			5488
EW04	733726			80
EW05	1472267			998
EW06	339184			0
EW07	1724742			2056
EW08	34357575			14090
LS01	7284442			2798
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

75

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one)

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: Drew

Date: 9/16/08

Time	LCS System	Remarks (Reason for System on or off)
840	On or <u>Off</u>	Tank Pull Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>84381</u>			<u>678</u>
EW01A	<u>497107</u>			<u>0</u>
EW02	<u>2229923</u>			<u>780</u>
EW03	<u>3120594</u>			<u>5966</u>
EW04	<u>733806</u>			<u>221</u>
EW05	<u>1473265</u>			<u>708</u>
EW06	<u>339184</u>			<u>0</u>
EW07	<u>1726798</u>			<u>620</u>
EW08	<u>34371665</u>			<u>2230</u>
LS01	<u>7287240</u>			<u>11103</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/18/08

Time	LCS System	Remarks (Reason for System on or off)
830	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	85059			1103
EW01A	497107			2
EW02	2230703			1100
EW03	3126560			6833
EW04	734027			338
EW05	1473973			1652
EW06	339184			0
EW07	1727418			927
EW08	3437389			621
LS01	7298343			13000
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 76 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 9/25/08

Time	LCS System	Remarks (Reason for System on or off)
8:30	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	86162			58
EW01A	497109			47
EW02	2231812			1111
EW03	3133393			7606
EW04	734365			290
EW05	1475625			2053
EW06	339184			0
EW07	1728345			787
EW08	34374516			328
LS01	7311343			12533
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 9/30/08

Time	LCS System	Remarks (Reason for System on or off)
8:30 8:30	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	86220			661
EW01A	497156			0
EW02	2232923			736
EW03	3140999			4740
EW04	734655			148
EW05	1477678			1724
EW06	339184			0
EW07	1729132			5
EW08	34374894			1
LS01	7323876			13317
LS02				

LCS Holding Tank:

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Time: _____

Depth of Fluid: _____

Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 10/2/08

Time	LCS System	Remarks (Reason for System on or off)
9:15	On or Off	SHIPPED 9500
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	86881			378
EW01A	497156			151
EW02	2233659			484
EW03	3145739			2895
EW04	734803			93
EW05	1479402			1098
EW06	339184			23
EW07	1729137			2497
EW08	34374895			1
LS01	7337193			14504
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off AutoGeneral Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened ClosedGeneral Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG **BLACKWELL LANDFILL SITE**

(Complete this form for every site visit to document operation of the leachate collection and
 LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAYDate: 10/9/08

Time	LCS System	Remarks (Reason for System on or off)
9:00	On or <u>Off</u>	Tank Full Shipped 10,000
10:30	<u>On</u> or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>87280</u>			<u>671</u>
EW01A	<u>497307</u>			<u>119</u>
EW02	<u>2234113</u>			<u>1019</u>
EW03	<u>3148634</u>			<u>6106</u>
EW04	<u>734899</u>			<u>364</u>
EW05	<u>1480500</u>			<u>2203</u>
EW06	<u>339207</u>			<u>16</u>
EW07	<u>1731634</u>			<u>2300</u>
EW08	<u>34374826</u>			<u>1570</u>
LS01	<u>7351697</u>			<u>2300</u>
LS02				<u>13547</u>

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DLT

Date: 10/16/08

Time	LCS System	Remarks (Reason for System on or off)
10/16/08	On or <u>Off</u>	TANK FULL STOPPED 10,000
10/16/08	<u>On</u> or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	87951			1208
EW01A	497426			0
EW02	2235132			2157
EW03	3154740			5436
EW04	735263			398
EW05	1482703			2375
EW06	339223			24
EW07	1733934			1235
EW08	3437496			77
LS01	7365244			11362
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 79 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY BARBOWICE

Date: 10/21/08

Time	LCS System	Remarks (Reason for System on or off)
8:00 A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	89159			466
EW01A	497426			134
EW02	2231289			681
EW03	3160176			2476
EW04	735661			99
EW05	1485028			1508
EW06	339247			0
EW07	1735169			2907
EW08	34375043			81
LS01	7376606			1386
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off Auto

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 10/23/08

Time	LCS System	Remarks (Reason for System on or off)
7:00	<input checked="" type="radio"/> On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	89625	90875		1250
EW01A	497560			156
EW02	2237970			1168
EW03	3162652			4578
EW04	735760			328
EW05	1486586			2211
EW06	339247			0
EW07	1738076			2458
EW08	34375124			126
LS01	7390469			11013
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

72

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one)

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: Ray/Gar

Date: 10/31/00

Time	LCS System	Remarks (Reason for System on or off)
9:00	(On) or Off	514,000 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>90075</u>			<u>977</u>
EW01A	<u>497716</u>			<u>428</u>
EW02	<u>2239130</u>			<u>1034</u>
EW03	<u>3167230</u>			<u>4316</u>
EW04	<u>736080</u>			<u>336</u>
EW05	<u>1420797</u>			<u>2097</u>
EW06	<u>339247</u>			<u>0</u>
EW07	<u>1740534</u>			<u>2327</u>
EW08	<u>34375250</u>			<u>67</u>
LS01	<u>7402202</u>			<u>10084</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: THOMAS RAY

Date: 11/6/08

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	91852			736
EW01A	498144			319
EW02	2240172			1249
EW03	3171546			3150
EW04	736420			215
EW05	1490894			2436
EW06	339247			26
EW07	1742861			2827
EW08	34375317			38
LS01	7412366			12884
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 73 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 11/13/08

Time	LCS System	Remarks (Reason for System on or off)
700	On or <input checked="" type="radio"/> Off	Tank full
830	<input checked="" type="radio"/> On or Off	SHIPPED 10,000
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	92588			778
EW01A	498463			358
EW02	2241421			1479
EW03	3174696			3838
EW04	736635			248
EW05	1493330			2478
EW06	339273			41
EW07	1745688			3114
EW08	34375355			384
LS01	7425250			12053
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 74

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

DRF/BPG/dlp/WGB

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REVISIO



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/20/08

Time	LCS System	Remarks (Reason for System on or off)
	<u>(On)</u> or Off	<u>Shipped 10,000</u>
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>93366</u>			<u>943</u>
EW01A	<u>498821</u>			<u>425</u>
EW02	<u>2242900</u>			<u>1445/45</u>
EW03	<u>3178534</u>			<u>3867</u>
EW04	<u>736893</u>			<u>260</u>
EW05	<u>1495808</u>			<u>2395</u>
EW06	<u>339314</u>			<u>46</u>
EW07	<u>1748802</u>			<u>2683</u>
EW08	<u>34375739</u>			<u>348</u>
LS01	<u>7437303</u>			<u>10931</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN Z Date: 11/26/08

Time	LCS System	Remarks (Reason for System on or off)
8:00 Am	On or <input checked="" type="radio"/> Off	Tank Full
9:00 Am	<input checked="" type="radio"/> On or Off	SHIPPED 10,000
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>94309</u>			<u>810</u>
EW01A	<u>499246</u>			<u>0</u>
EW02	<u>2244351</u>			<u>1450</u>
EW03	<u>3182401</u>			<u>3530</u>
EW04	<u>737143</u>			<u>246</u>
EW05	<u>1498203</u>			<u>2829</u>
EW06	<u>339360</u>			<u>0</u>
EW07	<u>1751485</u>			<u>3072</u>
EW08	<u>34376087</u>			<u>0</u>
LS01	<u>7448134</u>			<u>9775</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN ZIMMER

Date: 12/04/00

Time	LCS System	Remarks (Reason for System on or off)
7:30	On or <u>Off</u>	TANK FULL
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>95119</u>			<u>1139</u>
EW01A	<u>499246</u>			<u>0</u>
EW02	<u>2245801</u>			<u>2113</u>
EW03	<u>3185931</u>			<u>5465</u>
EW04	<u>737389</u>			<u>402</u>
EW05	<u>1501032</u>			<u>4060</u>
EW06	<u>339360</u>			<u>0</u>
EW07	<u>1754557</u>			<u>0</u>
EW08	<u>34276087</u>			<u>0</u>
LS01	<u>7457909</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 12/11/08

Time	LCS System	Remarks (Reason for System on or off)
915A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>96258</u>			<u>951</u>
EW01A	<u>499246</u>			<u>65</u>
EW02	<u>2247914</u>			<u>1509</u>
EW03	<u>3191396</u>			<u>3597</u>
EW04	<u>737791</u>			<u>275</u>
EW05	<u>1505092</u>			<u>2707</u>
EW06	<u>339360</u>			<u>0</u>
EW07	<u>1754557</u>			<u>3584</u>
EW08	<u>34376087</u>			<u>0</u>
LS01	<u>7457909</u>			<u>9256</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

71

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off

AUTO

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/16/08

Time	LCS System	Remarks (Reason for System on or off)
900A	(On) or Off	SHUT OFF 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>97209</u>			<u>1098</u>
EW01A	<u>499311</u>			<u>51</u>
EW02	<u>2249423</u>			<u>1557</u>
EW03	<u>3194993</u>			<u>5685</u>
EW04	<u>738066</u>			<u>268</u>
EW05	<u>1507799</u>			<u>2346</u>
EW06	<u>339360</u>			<u>0</u>
EW07	<u>1758141</u>			<u>3716</u>
EW08	<u>34376087</u>			<u>11</u>
LS01	<u>7467165</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 12/18/08

Time	LCS System	Remarks (Reason for System on or off)
900A	(On) or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	98307			1474
EW01A	499362			277
EW02	2250980			1216
EW03	3200678			7149
EW04	738334			103
EW05	1510145			2158
EW06	339260			0
EW07	1761857			2383
EW08	34376098			666
LS01	7467165			18
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 12/24/08

Time	LCS System	Remarks (Reason for System on or off)
7:15	<input checked="" type="radio"/> On or Off	SHIPPED 9000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	99781			1220
EW01A	499639			234
EW02	2252196			2446
EW03	3207877			7341
EW04	738437			439
EW05	1512303			3001
EW06	339360			0
EW07	1764240			224
EW08	34376764			17
LS01	7467183			1159
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/31/08

Time	LCS System	Remarks (Reason for System on or off)
915	On or Off	Shut off 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	101001			1682
EW01A	499873			365
EW02	2254642			2944
EW03	3215218			11618
EW04	738876			380
EW05	1515304			3129
EW06	339360			0
EW07	1764464			1373
EW08	34376281			358
LS01	7468342			109
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space Satisfactory Unsatisfactory
Leak Detection Riser Satisfactory Unsatisfactory
Tank High Level (75%) Satisfactory Unsatisfactory
Tank High Level (90%) Satisfactory Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection Satisfactory Unsatisfactory
High Level Satisfactory Unsatisfactory
Air Dryer Satisfactory Unsatisfactory
Compressor Satisfactory Unsatisfactory

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.

II: Landfill Gas (LFG) Venting System

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 1/8/09

Time	LCS System	Remarks (Reason for System on or off)
700 A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	102683			1880
EW01A	500238			339
EW02	2257586			2663
EW03	3226836			8971
EW04	739256			6
EW05	1518433			3773
EW06	339360			54
EW07	1765837			1036
EW08	34376639			101
LS01	7468451			9
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

<u>Alarm Panel Alarms</u>	<u>Status (Circle One)</u>		<u>If Unsatisfactory, Explain</u>
Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

<u>Interlock Alarms</u>	<u>Status (Circle One)</u>		<u>If Unsatisfactory, Explain</u>
Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.

II: Landfill Gas (LFG) Venting System

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 1/15/09

Time	LCS System	Remarks (Reason for System on or off)
900	(On) or Off	SHIPPED 9000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>104563</u>			<u>1261</u>
EW01A	<u>500577</u>			<u>148</u>
EW02	<u>2260249</u>			<u>2579</u>
EW03	<u>3235807</u>			<u>6120</u>
EW04	<u>739262</u>			<u>6</u>
EW05	<u>1522206</u>			<u>2577</u>
EW06	<u>339414</u>			<u>37</u>
EW07	<u>1766869</u>			<u>1436</u>
EW08	<u>34376740</u>			<u>68</u>
LS01	<u>7468460</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 1/22/09

Time	LCS System	Remarks (Reason for System on or off)
900	On or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	105824			2373
EW01A	500725			236
EW02	2262828			1464
EW03	3242527			8656
EW04	739268			9
EW05	1524783			3782
EW06	339451			10
EW07	1768304			4250
EW08	34376808			667
LS01	7468460			0
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

_____If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 1/29/09

Time	LCS System	Remarks (Reason for System on or off)
900	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>108197</u>			<u>1936</u>
EW01A	<u>500961</u>			<u>438</u>
EW02	<u>2264292</u>			<u>3113</u>
EW03	<u>3251183</u>			<u>5491</u>
EW04	<u>739277</u>			<u>10</u>
EW05	<u>1528565</u>			<u>2505</u>
EW06	<u>339461</u>			<u>42</u>
EW07	<u>1772554</u>			<u>1307</u>
EW08	<u>3437745</u>			<u>59</u>
LS01	<u>7468460</u>			<u>0</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 68 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 2/5/09

Time	LCS System	Remarks (Reason for System on or off)
10:00	On or Off	SHIPPED 5200
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	110133			1502
EW01A	501354			0
EW02	2267405			2949
EW03	3256674			5624
EW04	739287			995
EW05	1531070			3328
EW06	339503			0
EW07	1773861			1783
EW08	34377534			196
LS01	7468460			1148
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

**SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE**

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 2/12/09

Time	LCS System	Remarks (Reason for System on or off)
800	<input checked="" type="radio"/> On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	111635			937
EW01A	501354			231
EW02	2270354			1351
EW03	3262298			3490
EW04	740282			373
EW05	1534398			564
EW06	339503			26
EW07	1775644			1640
EW08	3437730			0
LS01	7469608			3507
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 68

Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 2/19/09

Time	LCS System	Remarks (Reason for System on or off)
10:00	<input checked="" type="radio"/> On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	112572			1887
EW01A	501585			250
EW02	2271705			2750
EW03	3265788			8756
EW04	740655			369
EW05	1534962			2747
EW06	339529			17
EW07	1777284			2086
EW08	34377730			39
LS01	7473115			2
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 68 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/26/09

Time	LCS System	Remarks (Reason for System on or off)
2/26/09	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	114459			1770
EW01A	501835			9
EW02	2274455			245
EW03	3274544			8635
EW04	741024			306
EW05	1537709			2942
EW06	339546			32
EW07	1779370			3361
EW08	34377769			54
LS01	7473117			35
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 71 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 3/5/09

Time	LCS System	Remarks (Reason for System on or off)
745	<input checked="" type="radio"/> On <input type="radio"/> Off	SHIPPED 8500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>116229</u>			<u>1237</u>
EW01A	<u>501844</u>			<u>384</u>
EW02	<u>2276906</u>			<u>2681</u>
EW03	<u>3283177</u>			<u>9055</u>
EW04	<u>741330</u>			<u>435</u>
EW05	<u>1540651</u>			<u>2866</u>
EW06	<u>339578</u>			<u>6</u>
EW07	<u>1782731</u>			<u>1955</u>
EW08	<u>34377823</u>			<u>0</u>
LS01	<u>7473152</u>			<u>5810</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 3/12/00

Time	LCS System	Remarks (Reason for System on or off)
900	<input checked="" type="radio"/> On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>117466</u>			<u>819</u>
EW01A	<u>50228</u>			<u>402</u>
EW02	<u>2279592</u>			<u>2452</u>
EW03	<u>3292232</u>			<u>8204</u>
EW04	<u>791765</u>			<u>347</u>
EW05	<u>1543517</u>			<u>1987</u>
EW06	<u>339584</u>			<u>34</u>
EW07	<u>1784686</u>			<u>2089</u>
EW08	<u>34377823</u>			<u>0</u>
LS01	<u>7478962</u>			<u>3647</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 3/17/09

Time	LCS System	Remarks (Reason for System on or off)
800	<u>On</u> or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	<u>118285</u>			<u>791</u>
EW01A	<u>502630</u>			<u>540</u>
EW02	<u>2282042</u>			<u>1690</u>
EW03	<u>3300736</u>			<u>7957</u>
EW04	<u>742112</u>			<u>181</u>
EW05	<u>1545504</u>			<u>1384</u>
EW06	<u>339618</u>			<u>22</u>
EW07	<u>1786775</u>			<u>2688</u>
EW08	<u>34377823</u>			<u>0</u>
LS01	<u>7482609</u>			<u>13026</u>
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG-monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 3/19/09

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	SHIPPED 9200
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	119076			1302
EW01A	503170			239
EW02	2283732			2250
EW03	3308393			8476
EW04	742293			280
EW05	1546888			1822
EW06	339640			0
EW07	1789463			2751
EW08	34377823			0
LS01	7495635			1305
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 67

Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/24/09

Time	LCS System	Remarks (Reason for System on or off)
10:45	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	120378			607
EW01A	503409			342
EW02	2285982			1457
EW03	3316869			4538
EW04	742573			126
EW05	1548710			1577
EW06	339640			12
EW07	1792217			2412
EW08	34377823			0
LS01	7508691			14819
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

70

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off

Auto

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 3/26/09

Time	LCS System	Remarks (Reason for System on or off)
10:45	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	120985			1578
EW01A	503751			262
EW02	2287439			2511
EW03	3321407			7170
EW04	742699			392
EW05	1550287			1848
EW06	339652			15
EW07	1794629			2483
EW08	34377823			0
LS01	7523510			9588
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 70

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 3/31/09

Time	LCS System	Remarks (Reason for System on or off)
745	On or Off	Skipped 7500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	122563			116
EW01A	504012			415
EW02	2289950			971
EW03	3328577			3157
EW04	743091			73
EW05	152135			1636
EW06	339667			30
EW07	1797112			2494
EW08	34377823			0
LS01	7533098			1506
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 4/2/09

Time	LCS System	Remarks (Reason for System on or off)
900	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	122679			154
EW01A	504417			267
EW02	2290921			1756
EW03	3331733			5066
EW04	743164			234
EW05	1553767			1385
EW06	339697			5
EW07	1799606			2361
EW08	34377823			0
LS01	7548126			1132
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 4/6/09

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	122833			188
EW01A	504684			275
EW02	2292677			2296
EW03	3336799			7055
EW04	743398			286
EW05	1555152			1756
EW06	339702			19
EW07	1801967			2962
EW08	34377823			0
LS01	7559453			11668
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 4/8/09

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	SHIPPED 9000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123021			274
EW01A	504959			358
EW02	2294976			1951
EW03	3343854			6215
EW04	743684			201
EW05	1556908			2222
EW06	339721			43
EW07	1804929			4187
EW08	34377823			57
LS01	2571121			22110
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/10/09

Time	LCS System	Remarks (Reason for System on or off)
800	<input checked="" type="radio"/> On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123295			230
EW01A	505317			258
EW02	2296927			772
EW03	3350069			3134
EW04	743885			66
EW05	1559130			1124
EW06	339764			8
EW07	1809126			3800
EW08	34377880			0
LS01	7593240			29213
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 77 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN Z.

Date: 04/13/09

Time	LCS System	Remarks (Reason for System on or off)
10:45	On or Off	Hourly 9,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	
EW01	123525				1
EW01A	505575				0
EW02	2297699				1677
EW03	3353203				4712
EW04	743951				162
EW05	1560254				1102
EW06	339772				0
EW07	1812926				2655
EW08	34377800				0
LS01	7622453				1758
LS02					

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN Z.

Date: 04/15/09

Time	LCS System	Remarks (Reason for System on or off)
10:15	On or Off	SHUTTEN 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123526			1
EW01A	505575			0
EW02	2299376			1506
EW03	3357915			4496
EW04	744113			134
EW05	1561356			1166
EW06	339772			0
EW07	1815581			1064
EW08	3437780			0
LS01	7640041			19813
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN ZINNEN

Date: 04/17/09

Time	LCS System	Remarks (Reason for System on or off)
9:53	On or Off	SHIPPED 10,000 GAL
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123527			0
EW01A	505575			0
EW02	2300882			1465
EW03	3362411			3936
EW04	744247			166
EW05	1562522			351
EW06	339772			0
EW07	1817445			1722
EW08	34377880			0
LS01	7659854			2140
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): _____

Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and
LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 04/20/09

Time	LCS System	Remarks (Reason for System on or off)
8 30	On or Off	shipped 9000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123527			1
EW01A	505575			0
EW02	2302347			1637
EW03	3366347			4375
EW04	744353			197
EW05	1562873			1294
EW06	339772			0
EW07	1819167			2480
EW08	34377880			162
LS01	7681264			1323
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F):

68

Heater Thermostat Setting (°F):

Status of Intake Fan (circle one):

On

Off

AUTO

General Notes/Comments (building, tank risers, fence, etc.):

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.):

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time:

Average Wind Speed (mph) and Direction toward:

Barometric Pressure (in. Hg):

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 4/22/09

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123528			0
EW01A	505575			0
EW02	2303984			1692
EW03	3370720			4530
EW04	744550			165
EW05	1564167			1327
EW06	339772			0
EW07	1821647			2139
EW08	34378042			0
LS01	7694501			20988
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

Building Inside Temperature (°F): 68 Heater Thermostat Setting (°F): _____Status of Intake Fan (circle one): On Off Auto

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 4/24/09

Time	LCS System	Remarks (Reason for System on or off)
900	On or Off	SHIPPED 9500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123528			1
EW01A	505575			476
EW02	2305676			2560
EW03	3375250			8128
EW04	744715			294
EW05	1565494			1567
EW06	339772			0
EW07	1823786			1
EW08	34378042			0
LS01	7715489			26780
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

Building Inside Temperature (°F): 71

Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

AUTO

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one):

Opened

Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____

Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY

Date: 4/27/09

Time	LCS System	Remarks (Reason for System on or off)
800	<u>On</u> or Off	SHIPPED 9000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123529			70
EW01A	506051			2
EW02	2308236			956
EW03	3383378			2881
EW04	745009			106
EW05	1567061			902
EW06	339772			0
EW07	1823787			0
EW08	34378042			0
LS01	7742275			11346
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.



MONTGOMERY WATSON

SITE VISIT OPERATING LOG BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: ~~WATSON~~ RAY

Date: 4/29/09

Time	LCS System	Remarks (Reason for System on or off)
700	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	123599			1
EW01A	506053			0
EW02	2309192			1659
EW03	3386259			7054
EW04	745115			196
EW05	1567963			848
EW06	339772			9
EW07	1823787			0
EW08	34378042			15
LS01	7753621			2177
LS02				

LCS Holding Tank:

Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____
Time: _____	Depth of Fluid: _____	Volume of Liquid: _____

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	Satisfactory	Unsatisfactory	_____
Leak Detection Riser	Satisfactory	Unsatisfactory	_____
Tank High Level (75%)	Satisfactory	Unsatisfactory	_____
Tank High Level (90%)	Satisfactory	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	Satisfactory	Unsatisfactory	_____
High Level	Satisfactory	Unsatisfactory	_____
Air Dryer	Satisfactory	Unsatisfactory	_____
Compressor	Satisfactory	Unsatisfactory	_____

Building Inside Temperature (°F): _____ Heater Thermostat Setting (°F): _____

Status of Intake Fan (circle one): On Off

General Notes/Comments (building, tank risers, fence, etc.): _____

If leachate load-out and disposal scheduled today, document with Leachate Disposal Log.**II: Landfill Gas (LFG) Venting System**

Manual vent isolation valve position at stack (circle one): Opened Closed

General Notes/Comments (building, tank risers, fence, etc.): _____

To obtain climatic weather information call (815) 834-1435 between the hours of noon and 4:00 P.M.

Temperature (°F) and Time: _____

Average Wind Speed (mph) and Direction toward: _____

Barometric Pressure (in. Hg): _____ Trend: F S R (circle one)

Rainfall: Track daily totals per DuPage Co. Airport (attached data when available).

Document LFG monitoring with the LFG Monitoring Form.

APPENDIX A-2

Inspection Report Forms

**MWH**

MONTGOMERY WATSON HARZA

**INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE**Date: 5/14/08 Time (start): 0845 Time (end): 1400Monitored By: JUSTIN FINGER / AMANDA BUTLER

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 78		
Barometric Pressure	Low	Moderate	High	In. Hg: 29.94 or hPA: _____		

To obtain climatic weather information logon to <http://www.wunderground.com>.**I. Leachate Collection System (LCS): General**

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

II. Landfill Gas (LFG) Venting System

Gas Composition Readings (with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.15	66.5	36.7	0.5	Good
EW01A	0.00	0.0	0.1	20.4	Good
EW02	0.01	54.8	29.9	2.5	Good
EW03	0.00	66.7	33.1	0.5	Good
EW04	0.40	72.2	30.9	0.2	Good
EW05	0.00	0.0	0.0	20.4	Good
EW06	0.72	70.0	34.6	0.1	Good
EW07	1.80	69.3	34.1	0.0	Good
EW08	—	—	—	—	Good

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	220	44.04	59.6	30.1	0.9	59.6

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		
General Drainage	✓		

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: _____

MEASUREMENTS WERE NOT CONDUCTED AT SV-4, DV-4, AND
DV-9 BECAUSE THE VAULTS WERE FLOODED

DV-8 COULD NOT BE ISOLATED FROM THE LFE SYSTEM BECAUSE
OF HIGH WATER IN THE VAULT

Signature: _____

Title: _____

GEOLOGIST / PROJECT
SCIENTIST

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**MWH**

MONTGOMERY WATSON HARZA

**INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE**Date: 7/9/08 Time (start): 0800 Time (end): 1400Monitored By: JUSTIN FINGER / TIM CARROLL

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 61		
Barometric Pressure	Low	Moderate	High	In. Hg: 29.94 or hPA: _____		

To obtain climatic weather information logon to <http://www.wunderground.com>.**I. Leachate Collection System (LCS): General**

Time	LCS System	Remarks (Reason for System on or off)
	On or <u>Off</u>	<u>SYSTEM OFF DURING OUR MONITORING</u>
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

II. Landfill Gas (LFG) Venting System

Gas Composition Readings (with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.24	65.2	34.8	0.0	Good
EW01A	0.02	56.5	28.0	0.0	Good
EW02	0.04	62.0	37.8	0.0	Good
EW03	0.02	66.4	33.6	0.0	Good
EW04	0.00	70.9	29.0	0.0	Good
EW05	0.00	76.7	23.3	0.0	Good
EW06	0.78	69.1	30.9	0.0	Good
EW07	2.30	68.5	31.5	0.0	Good
EW08	—	—	—	—	Good

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	290	58.06	54.4	29.3	2.2	75.6

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		VEGETATION IS VERY ABUNDANT
General Drainage	✓		NO AREAS OF STANDING WATER WERE OBSERVED

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		SOME RUTS NEAR L501
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: _____

MEASUREMENTS WERE NOT COLLECTED AT DV-17 BECAUSE VAULT COULD
NOT BE LOCATED DUE TO EXCESSIVE VEGETATION
ISOLATION VALVE NEAR FWD:A IS RAISED ABOVE THE RIM OF THE VAULT -
COVER IS NOT ABLE TO BE CLOSED

Signature: _____

[Handwritten Signature]

Title: GEOLOGIST / PROJECT SCIENTIST

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**MWH**

MONTGOMERY WATSON HARZA

**INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE**Date: 9/10/08 Time (start): 0800 Time (end): 1700Monitored By: JUSTIN FINGER / AMANDA BUTLER

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 63		
Barometric Pressure	Low	Moderate	High	In. Hg: 30.23 or hPA: _____		

To obtain climatic weather information logon to <http://www.wunderground.com>.**I. Leachate Collection System (LCS): General**

Time	LCS System	Remarks (Reason for System on or off)
	On or <u>Off</u>	<u>DUPLICATE OF MEASUREMENTS</u>
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Tank Annular Space

Satisfactory

Unsatisfactory

Leak Detection Riser

Satisfactory

Unsatisfactory

Tank High Level (75%)

Satisfactory

Unsatisfactory

Tank High Level (90%)

Satisfactory

Unsatisfactory

Interlock Alarms**Status (Circle One)****If Unsatisfactory, Explain**

Leak Detection

Satisfactory

Unsatisfactory

High Level

Satisfactory

Unsatisfactory

Air Dryer

Satisfactory

Unsatisfactory

Compressor

Satisfactory

Unsatisfactory

II. Landfill Gas (LFG) Venting System

Gas Composition Readings (with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.28	61.5	37.5	0.0	Good
EW01A	0.04	47.0	25.8	0.0	Good
EW02	0.12	61.8	37.1	0.2	Good
EW03	0.06	64.6	34.8	0.0	Good
EW04	0.10	67.5	29.3	0.0	Good
EW05	0.04	74.2	25.6	0.0	Good
EW06	0.90	66.3	34.6	0.0	Good
EW07	2.20	65.3	35.4	0.0	Good
EW08	—	—	—	—	Good

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	305	61.06	51.8	29.2	2.0	59.4

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		NO AREAS OF DEAD/STRESSED VEGETATION. VEGETATION IS VERY ABUNDANT.
General Drainage	✓		NO STANDING WATER

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		SOME MINOR RUTS ON ALLEYS NEAR NEAR L501
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: MEASUREMENTS WERE NOT COLLECTED AT DV-17
BECAUSE VAULT COULD NOT BE LOCATED DUE TO EXCESSIVE VEGETATION.

DEPTH TO WATER MEASUREMENTS WERE NOT RECORDED AT SV-2, SV-7, DV-5,
DV-6, AND DV-7 BECAUSE THESE VENTS WERE DRY.

Signature:

Title: PROJECT SCIENTIST / GEOLOGIST

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INSPECTION REPORTING FORM BLACKWELL LANDFILL SITE

Date: 11/19/08 Time (start): 0800 Time (end): 1530

Monitored By: JUSTIN FINGER / DENISE ARMSTRONG

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 56		
Barometric Pressure	Low	Moderate	High	In. Hg: 30.05 or hPA: _____		

To obtain climatic weather information logon to <http://www.wunderground.com>.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or <u>Off</u>	OFF ALL DAY - FOR OWN MAINTENANCE AND BECAUSE TANK WAS FULL
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms

Status (Circle One)

If Unsatisfactory, Explain

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory

Interlock Alarms

Status (Circle One)

If Unsatisfactory, Explain

Leak Detection	<u>Satisfactory</u>	Unsatisfactory
High Level	<u>Satisfactory</u>	Unsatisfactory
Air Dryer	<u>Satisfactory</u>	Unsatisfactory
Compressor	<u>Satisfactory</u>	Unsatisfactory

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	<u>93366</u>	<u>12,604</u>	<u>063503</u>	<u>30.81</u>
EW01A	<u>498463</u>	<u>67,293</u>	<u>905311</u>	<u>38.37</u>
EW02	<u>2242900</u>	<u>302,792</u>	<u>899708</u>	<u>58.22</u>
EW03	<u>3178534</u>	<u>429,102</u>	<u>768077</u>	<u>40.16</u>
EW04	<u>736883</u>	<u>99,479</u>	<u>295938</u>	<u>—</u>
EW05	<u>1495808</u>	<u>201,934</u>	<u>194675</u>	<u>77.48</u>
EW06	<u>339273</u>	<u>45,802</u>	<u>921676</u>	<u>40.80</u>
EW07	<u>1748802</u>	<u>236,088</u>	<u>562765</u>	<u>55.96</u>
EW08	<u>34375355</u>	<u>4,640,673</u>	<u>1292--</u>	<u>—</u>
LS01	<u>7437303</u>	<u>1,004,036</u>	<u>238290</u>	<u>—</u>
LS023	<u>367469</u>	<u>49,608</u>	<u>—</u>	<u>—</u>

Building Inside Temperature (°F): 74 Heater Thermostat Setting (°F): 56

Status of Intake Fan (circle one): On Off Auto @ 90°F

General Notes/Comments (building, tank risers, fence, etc.): _____

ALL IN SATISFACTORY CONDITION

II. Landfill Gas (LFG) Venting System

Gas Composition Readings (with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.0	59.0	40.3	0.3	Good
EW01A	0.0	3.5	2.9	20.7	Good
EW02	0.0	57.9	35.2	0.2	Good
EW03	0.0	63.3	36.3	0.0	Good
EW04	0.0	67.8	31.8	0.2	Good
EW05	0.0	67.8	27.7	0.0	Good
EW06	0.0	62.7	36.8	0.0	Good
EW07	0.01	62.5	37.4	0.0	Good
EW08	—	—	—	—	Good

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	500	100.10	59.2	33.6	0.3	44.9

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		
General Drainage	✓		SOME STANDING WATER ON NORTH SIDE OF LANDFILL AT BASE OF TUBE RUN SWIRE

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		REGRADING HAS BEEN COMPLETED ON ACCESS ROADS TO TOP OF HILL
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: _____

METHANE, CARBON DIOXIDE, AND OXYGEN MEASUREMENTS COULD NOT BE
COLLECTED AT SV-4 OR DV-10 BECAUSE EQUIPMENT MALFUNCTIONED.

VELUMETER MAY HAVE BEEN WORKING IMPROPERLY - READINGS APPEARED
LOWER THAN FIELD CONDITIONS INDICATED.

LEACHATE LEVELS COULD NOT BE MEASURED AT SV-2, DV-6, OR DV-7
BECAUSE THESE VENTS WERE DRY.

Signature: 

Title: GEOL. IST / PROJECT SCIENTIST

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MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM BLACKWELL LANDFILL SITE

Date: 1/21/09 Time (start): 0800 Time (end): 1500

Monitored By: J. FINGER / A. BUTLER

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North South East West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 74		
Barometric Pressure	Low	Moderate	High	In. Hg: 29.99 or hPA: _____		

To obtain climatic weather information logon to <http://www.wunderground.com>.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or <u>Off</u>	OFF FOR O&M MEASUREMENTS
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms

Status (Circle One)

If Unsatisfactory, Explain

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms

Status (Circle One)

If Unsatisfactory, Explain

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

II. Landfill Gas (LFG) Venting System

Gas Composition Readings (with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	NM	NM	NM	NM	NM
EW01A	NM	60.7	27.9	0.0	Good
EW02	NM	58.7	39.9	12.3	Good
EW03	NM	68.8	40.6	12.3	Good
EW04	NM	70.4	0.0	12.3	Good
EW05	NM	71.8	31.3	12.3	Good
EW06	NM	69.1	39.9	12.3	Good
EW07	NM	58.5	40.5	12.3	Good
EW08	—	—	—	—	Good

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	525	105.10	64.1	34.7	12.3	26.0

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer		✓	VALVE SCREEN NEEDS REPAIRS - WILL BE REPAIRED ON 1/22/09

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		HEAVY SNOW COVER ON LANDFILL
Vegetative Cover	✓		
General Drainage	✓		

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		ACCESS ROADS HAVE HEAVY SNOW COVER
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: MEASUREMENTS WERE NOT COLLECTED AT SV-1, SV-2,
SV-4, SV-5, SV-8, SV-9, SV-12, DV-3, DV-4, DV-6, DV-8, DV-9,
DV-11, DV-13, DV-14, DV-15, DV-16, DV-18, EW01, AND LS01 DUE
TO FROZEN VALVES

~~DEPTH~~ PRESSURE MEASUREMENTS WERE NOT COLLECTED BECAUSE RENTAL COMPANY
DID NOT SEND PROPER INSTRUMENT

OXYGEN READINGS FROM GAS ANALYZER APPEAR TO BE INACCURATE

Signature:

Title: PROJECT SUPERVISOR / GEOLOGIST

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MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM BLACKWELL LANDFILL SITE

Date: 3/9/09 Time (start): 0730 Time (end): 1300

Monitored By: JEF/TPC

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 77		
Barometric Pressure	Low	Moderate	High	In. Hg: 30.15 or hPA: _____		

To obtain climatic weather information logon to <http://www.wunderground.com>.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or <u>Off</u>	
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms

Status (Circle One)

If Unsatisfactory, Explain

Tank Annular Space	<u>Satisfactory</u>	Unsatisfactory	_____
Leak Detection Riser	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (75%)	<u>Satisfactory</u>	Unsatisfactory	_____
Tank High Level (90%)	<u>Satisfactory</u>	Unsatisfactory	_____

Interlock Alarms

Status (Circle One)

If Unsatisfactory, Explain

Leak Detection	<u>Satisfactory</u>	Unsatisfactory	_____
High Level	<u>Satisfactory</u>	Unsatisfactory	_____
Air Dryer	<u>Satisfactory</u>	Unsatisfactory	_____
Compressor	<u>Satisfactory</u>	Unsatisfactory	_____

II. Landfill Gas (LFG) Venting System

Gas Composition Readings (with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.0	61.9	54.4	0.2	Good
EW01A	NM	NM	NM	NM	Good
EW02	0.0	64.9	33.0	0.5	Good
EW03	0.0	65.7	31.8	0.1	Good
EW04	0.0	72.8	26.2	0.0	Good
EW05	0.0	0.0	0.2	20.0	Good
EW06	0.0	66.2	32.7	0.9	Good
EW07	0.0	65.6	34.2	1.1	Good
EW08	—	—	—	—	Good

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	120	24.02	60.6	31.1	0.9	39.2

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		DV-3, DV-17 WELL CAPPING HAS RISEN ABOVE VAULT. EW-DIA FLOODED. SEVERAL VENTS FLOODED

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		SOME EROSION NEAR TOP OF HILL AND ON EASTERN SIDE OF HILL NEAR SV-7
Vegetative Cover	✓		
General Drainage	✓		SOME STANDING WATER BY TUBE RUN SPED, ON ROCKS AND NEAR 25 DI

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions		✓	LARGE RVR ON ACCESS ROAD TO NW OF MT 407, REPAIRS ARE BEING SCHEDULED
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments:

ALNOR VELMETER APPEARS TO HAVE BEEN MALFUNCTIONING - ALL PRESSURE
READINGS WERE ZERO, EVEN WHEN PRESSURE WAS OBSERVED AT CERTAIN LOCATIONS.

MEASUREMENTS WERE NOT COLLECTED AT SV-1, SV-4, DV-4, DV-6, DV-9, DV-11,
DV-15, AND EW-01A DUE TO FLOODED VAULTS.

DV-16 COULD NOT BE ISOLATED FROM LFC SYSTEM PRIOR TO COLLECTING
MEASUREMENTS DUE TO HIGH WATER IN VAULT.

LEACHATE LEVEL WAS NOT MEASURED AT SV-2 BECAUSE THE VENT WAS DRY.

Signature: 

Title: PROJECT SCIENTIST / GEOPHYSICIST

RHS/WGB/mbm/jmf
J:\209\0764 Blackwell\20900764n06.doc
2090764.018101

APPENDIX A-3

Maintenance and Repair Record Forms

Maintenance Record No.: 2008 - 428

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 04/28/08
Date Problem was Observed: 04/28/08

BRIEF DESCRIPTION OF PROBLEM

Low air pressure

Person or Contractor Completing Maintenance or Repair: Ray MWH Hardhat

Completion Date: 05/05/08

MAINTENANCE or REPAIR PERFORMED

Repaired shut-off valve in LS01

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 05/05/08

Inspector's Signature: _____

Maintenance Record No.: 2008 - 521

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 05/21/08
Date Problem was Observed: 05/21/08

BRIEF DESCRIPTION OF PROBLEM

Pump In EW-3 not cycling

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 05/21/08

MAINTENANCE or REPAIR PERFORMED

Float stuck, cleaned pump

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 05/21/08

Inspector's Signature: _____

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 06/25/08
Date Problem was Observed: 06/25/08

BRIEF DESCRIPTION OF PROBLEM

Pump In EW-5 not cycling

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 06/25/08

MAINTENANCE or REPAIR PERFORMED

Float getting hung up. cleaned float pump is working

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 06/25/08

Inspector's Signature: _____

Maintenance Record No.: 2008 - 911

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 09/11/08
Date Problem was Observed: 09/11/08

BRIEF DESCRIPTION OF PROBLEM

EW-8 and EW-3 need cleaning

Person or Contractor Completing Maintenance or Repair: Ray

Completion Date: 09/11/08

MAINTENANCE or REPAIR PERFORMED

Pumps cleaned

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 09/11/08

Inspector's Signature: _____

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 09/16/08
Date Problem was Observed: 09/16/08

BRIEF DESCRIPTION OF PROBLEM

Water in air lines

Person or Contractor Completing Maintenance or Repair: Ray

Completion Date: 09/16/08

MAINTENANCE or REPAIR PERFORMED

Air lines drained compressor started and returned to normal operation

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 09/16/08

Inspector's Signature: _____

Maintenance Record No.: 2008 - 925

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 09/25/08
Date Problem was Observed: 09/25/08

BRIEF DESCRIPTION OF PROBLEM

Tank float shows tank full when tank is empty

Person or Contractor Completing Maintenance or Repair: Ray Drew

Completion Date: 09/25/08

MAINTENANCE or REPAIR PERFORMED

Installed new float for tank

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 09/25/08

Inspector's Signature: _____

Maintenance Record No.: 2008 - 1021

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 10/21/08
Date Problem was Observed: 10/21/08

BRIEF DESCRIPTION OF PROBLEM

Belt broke on compressor

Person or Contractor Completing Maintenance or Repair: Ray

Completion Date: 10/21/08

MAINTENANCE or REPAIR PERFORMED

Installed new belts

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/21/08

Inspector's Signature: _____

Maintenance Record No.: 2009 - 122

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 1/22/09
Date Problem was Observed: 1/22/09

BRIEF DESCRIPTION OF PROBLEM

Dryer not cycling

Person or Contractor Completing Maintenance or Repair: A-1 compressor

Completion Date: 1/22/09

MAINTENANCE or REPAIR PERFORMED

A hole was found in dryer screen The screen was replaced

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/22/09

Inspector's Signature: Ray Babowice

Maintenance Record No.: 2009 - 122

**BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM**

Inspector's Name: Ray Babowice
Date of the Record: 4/1/09
Date Problem was Observed: 4/1/09

BRIEF DESCRIPTION OF PROBLEM

Blackhawk pump in LS-3 not working

Person or Contractor Completing Maintenance or Repair: Ray

Completion Date: 4/1/09

MAINTENANCE or REPAIR PERFORMED

Removed Blackhawk pump put in rebuilt clean pump

VERIFICATION OF COMPLETION



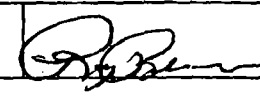
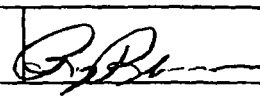
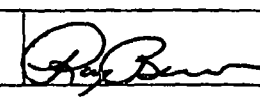
Inspector's Name: Ray Babowice
Verification of Completion Date: 4/1/09

Inspector's Signature: Ray Babowice

APPENDIX A-4

Leachate Disposal Logs

**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	4/28/08	003281496	5300	ADUMER	RAY	
	Comments					
2	5/12/08	003281499 003281500	10,000	ADUMER	RAY	
	Comments					
3	5/14/08	004565976 004565977	10,000	ADVANCED	RAY	
	Comments					
4	5/16/08	004565978 004565979	10,000	ADVANCED	RAY	
	Comments					
5	5/19/08	004565980 004565981	10,000	ADVANCED	RAY	
	Comments					
6						
	Comments					
7						
	Comments					
8						
	Comments					
9						
	Comments					


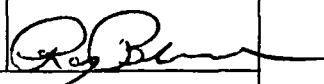

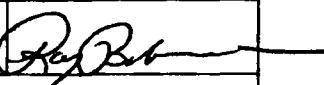


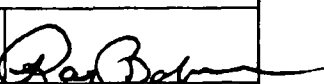
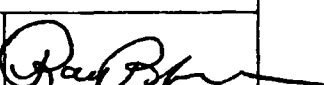
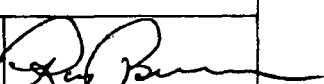
LEACHATE DISPOSAL LOG BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	5/21/08	004565983 004565984	8500	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
2	5/23/08	004565986 004565985	9000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
3	5/28/08	004565984 004565985	10,000	ADVANCED	DEAN	<i>Dean B...</i>
	Comments					
4	5/30/08	004565986 004565987	8800	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
5	6/2/08	004563989 004563984	10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
6	6/4/08	004563990	5800	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
7	6/6/08	004563991 004563992	9000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
8	6/9/08	004563993	5000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
9	6/11/08	004565994 004565995	9500	ADVANCED	RAY	<i>Ray B...</i>
	Comments					

**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	6/13/08	004565996 004565997	10,000	Advanced	RAY	Ray B...
	Comments					
2	6/16/08	004565998 004395089	10,000	Advanced	RAY	Ray B...
	Comments					
3	6/20/08	004395089 004395090	10,000	Advanced	RAY	Ray B...
	Comments					
4	6/23/08	004395091 004395092	10,000	Advanced	RAY	Ray B...
	Comments					
5	6/25/08	004401092 004410893	10,000	Advanced	RAY	Ray B...
	Comments					
6	6/27/08	004395093 004395094	9800	Advanced	RAY	Ray B...
	Comments					
7	7/1/08	004395095 004395096	10,000	Advanced	RAY	Ray B...
	Comments					
8	7/3/08	004395097 004395098	10,000	Advanced	RAY	Ray B...
	Comments					
9	7/7/08	004395099 004395100	10,000	Advanced	RAY	Ray B...
	Comments					


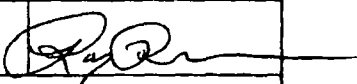



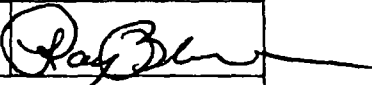
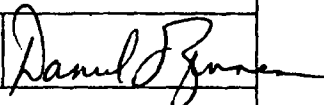
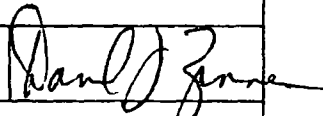
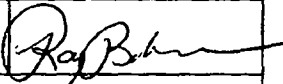
**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	7/11/08	00439561	6000	Advanced	RAY	
	Comments					
2	7/14/08	00439562 004395103	10,000	Advanced	RAY	
	Comments					
3	7/16/08	004395104	5000	Advanced	RAY	
	Comments					
4	7/21/08	004395105 004395106	8500	Advanced	RAY	
	Comments					
5	7/24/08	004395107	3550	Advanced	RAY	
	Comments					
6	7/31/08	004395108	5500	Advanced	RAY	
	Comments					
7	8/7/08	004395109	5900	Advanced	RAY	
	Comments					
8	8/14/08	004395110	5000	Advanced	RAY	
	Comments					
9	8/21/08	004395111	3600	Advanced	RAY	
	Comments					

**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	9/4/08	004395112	5500	ADVANCED	RAY	Ray Baber
	Comments					
2	9/11/08	004395113	3800	ADVANCED	RAY	Ray Baber
	Comments					
3	9/16/08	004395114 004395115	10,000	ADVANCED	DREW	Drew B.
	Comments					
4	9/18/08	00439516 00439517	10,000	ADVANCED	RAY	Ray Baber
	Comments					
5	9/25/08	004395118 004402169	10,000	ADVANCED	RAY	Ray Baber
	Comments					
6	9/30/08	004760215 004760216	10,000	ADVANCED	RAY	Ray Baber
	Comments					
7	10/2/08	004760217 004760218	9500 10,000	ADVANCED	RAY	Ray Baber
	Comments					
8	10/9/08	004760219 004760220	10,000	ADVANCED	RAY	Ray Baber
	Comments					
9	10/16/08	004760221 004760222	10,000	ADVANCED	DAN Z.	Daniel Z.
	Comments					

**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	10/21/08	00476223 00476224	10,000	ADVANCED	RAY	
	Comments					
2	10/23/08	00476225 00476226	10,000	ADVANCED	RAY	
	Comments					
3	10/30/08	004760227 004760228	10,000	ADVANCED	RAY DAN Z	
	Comments					
4	11/6/08	004760229 004760230	10,000	ADVANCED	RAY	
	Comments					
5	11/13/08	004760231 004760232	10,000	ADVANCED	RAY	
	Comments					
6	11/20/08	004760233 004760234	10,000	ADVANCED	RAY	
	Comments					
7	11/26/08	004760235 004760236	10,000	ADVANCED	DAN Z	
	Comments					
8	12/04/08	004760237 004760238	10,000	ADVANCED	DAN ZINNER	
	Comments					
9	12/11/08	004760239 004760240	10,000	ADVANCED	RAY	
	Comments					

**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	12/16/08	004760241 004760242	10,000	ADVANCED	RAY	<i>Ray Bohn</i>
Comments						
2	12/18/08	004760243 004760244	10,000	ADVANCED	RAY	<i>Ray Bohn</i>
Comments						
3	12/24/08	004760245 004760246	9000	ADVANCED	RAY	<i>Ray Bohn</i>
Comments						
4	12/31/08	004760247 004760248	10,000	ADVANCED	RAY	<i>Ray Bohn</i>
Comments						
5	1/					
Comments						
6						
Comments						
7						
Comments						
8						
Comments						
9						
Comments						


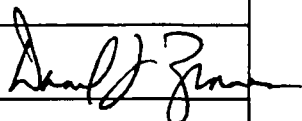
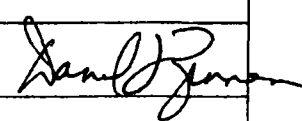
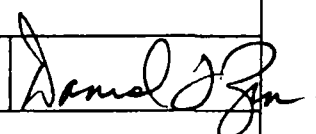




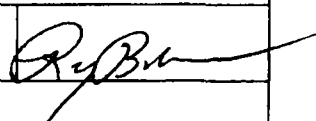


**LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE**

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	3/12/09	005415060 005415061	10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments	005415062 manifest VOID				
2	3/17/09	005415063 005415064	10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
3	3/19/09	005415065 005415066	9200	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
4	3/24/09	005415067 005415068	10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
5	3/26/09	005415069 005416570	10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
6	3/31/09	005415071 005415072	7500	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
7	4/2/09	005415073 005415074	10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
8	4/6/09	005415075 005415076	10,000 10,000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					
9	4/8/09	005415077 005415078	9000	ADVANCED	RAY	<i>Ray B...</i>
	Comments					

LEACHATE DISPOSAL LOG

BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	4/10/09	005415079 005415080	10,000	ADVANCED	RAY	
Comments						
2	04/13/09	005415081 005415082	9,000	ADVANCED	DAN Z	
Comments						
3	04/15/09	005415083 005415084	10,000	ADVANCED	DAN Z	
Comments						
4	04/17/09	005415085 005415086	10,000	ADVANCED	DAN Z	
Comments						
5	04/20/09	005415087 005415089	9000	ADVANCED	RAY	
Comments						
6	4/22/09	005415089 005415090	10,000	ADVANCED	RAY	
Comments						
7	4/24/09	005415091 005415092	9500	ADVANCED	RAY	
Comments						
8	4/27/09	005415093 005415094	9000	ADVANCED	RAY	
Comments						
9	4/29/09	005415095 005415096	10,000	ADVANCED	RAY	
Comments						

APPENDIX A-5

Landfill Gas Vent Monitoring Forms

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 5/14/2008
Time: 0900 - 1400
Monitored By: JEF/ACB

Temperature(° F): 66
Humidity (%): 78%
Barometric Pressure (in. Hg): 29.84

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH ₄	%CO ₂	%O ₂	I.D. (ft)	Velocity (fpm)	Volume (ft ³ /min)	% of Total	Static Pressure (in. H ₂ O)	Temperature (°F)	
SV-1	739.39	16.00	5.60	733.79	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.75	741.29	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to vault being flooded
SV-5	725.74	27.00	1.49	724.25	0.0	0.0	20.8	0.172	0	0.000	0.000	0.00	61.6	
SV-6	760.46	45.70	28.62	731.84	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	50.62	730.39	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	723.03	25.20	4.96	718.07	6.7	3.6	18.6	0.172	3	0.070	0.115	0.005	61.3	
SV-9	748.77	50.00	34.84	713.93	69.6	34.8	0.3	0.172	30	0.699	1.152	2.30	62.3	
SV-11	807.38	91.40	68.97	738.41	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	62.29	761.53	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.29	36.75	15.48	733.81	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to vault being flooded
DV-5	720.35	29.00	5.15	715.20	4.9	2.5	18.3	0.172	0	0.000	0.000	0.01	61.5	
DV-6	775.56	68.25	32.63	742.93	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-7	829.62	86.90	83.00	746.62	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	1.12	727.61	0.2	0.2	20.7	0.336	1	0.088	0.146	0.00	65.9	Could not isolate vent from LFG system due to high water in vault
DV-9	723.56	22.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to vault being flooded
DV-10	765.05	67.40	41.61	723.44	0.0	0.0	20.8	0.336	2	0.177	0.291	0.00	63.6	
DV-11	753.50	34.75	1.33	752.17	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	24.08	722.21	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	16.36	721.86	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	33.19	702.98	22.9	12.6	13.6	0.336	29	2.562	4.226	0.40	63.8	
DV-16	733.85	34.00	10.73	723.12	70.0	33.7	0.4	0.336	117	10.338	17.052	4.00	59.6	
DV-17	729.07	37.20	4.43	724.64	1.2	0.5	19.7	0.336	1	0.088	0.146	0.00	62.0	
DV-18	775.13	54.20	32.36	742.77	68.1	35.9	0.5	0.336	29	2.562	4.226	2.00	61.2	
EW-1	753.98	43.85	29.59	724.39	66.5	36.7	0.5	NA	NA	NA	NA	0.15	59.6	Vault counter 30178
EW-1A	752.22	42.50	38.32	713.90	0.0	0.1	20.4	NA	NA	NA	NA	0.00	60.5	Vault counter 901260
EW-2	792.24	81.50	57.75	734.49	54.8	29.9	2.5	NA	NA	NA	NA	0.01	65.5	Vault counter 841311
EW-3	768.36	62.40	38.76	729.60	66.7	33.1	0.5	NA	NA	NA	NA	0.00	60.8	Vault counter 693555
EW-4	835.30	NA	NA	NA	72.2	30.9	0.2	NA	NA	NA	NA	0.40	61.5	Vault counter 286747
EW-5	808.92	89.90	85.10	723.82	0.0	0.0	20.4	NA	NA	NA	NA	0.00	59.2	Vault counter 112240
EW-6	764.73	64.60	42.10	722.63	70.0	34.6	0.1	NA	NA	NA	NA	0.72	61.6	Vault counter 921676
EW-7	772.83	63.10	57.01	715.82	69.3	34.1	0.0	NA	NA	NA	NA	1.80	56.4	Vault counter 452605
EW-8	756.16	43.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Vault counter 1292__ Last 2 digits not readable

- Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O₂ - Oxygen Percentage
3) CH₄ - Methane Percentage
4) CO₂ - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date

Main Vent	59.6	30.1	0.9	0.505	220	44.04	72.645	NA	59.6	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due pipe size constrictions
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TOTAL VOLUME (ft³/min)= 60.63

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH ₄	% CO ₂	% O ₂	counter = 238250
LS01	NA	0.0	2.5	19.8	p=0.00

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 7/9/2008
Time: 0800-1400
Monitored By: JEF/TPC

Temperature(° F): 84
Humidity (%): 61%
Barometric Pressure (in. Hg): 29.94

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH ₄	%CO ₂	%O ₂	I.D. (ft)	Velocity (fpm)	Volume (ft ³ /min)	% of Total	Static Pressure (in. H ₂ O)	Temperature (°F)	
SV-1	739.39	16.00	5.23	734.16	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-2	766.04	53.25	24.75	741.29	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-4	741.36	27.15	13.71	727.65	3.1	1.0	19.5	0.172	3	0.070	0.096	0.00	96.5	
SV-5	725.74	27.00	6.92	718.82	3.2	1.7	19.5	0.172	1	0.023	0.032	0.00	91.1	
SV-6	760.46	45.70	29.29	731.17	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.06	729.95	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	723.03	25.20	5.66	717.37	7.9	4.1	18.5	0.172	4	0.093	0.128	0.00	75.9	
SV-9	748.77	50.00	34.99	713.78	52.2	29.9	3.6	0.172	30	0.699	0.961	2.60	75.5	
SV-11	807.38	91.40	69.22	738.16	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	62.30	761.52	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.29	36.75	16.19	733.10	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	19.86	703.39	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	12.58	707.77	26.0	14.2	12.3	0.172	25	0.582	0.801	0.00	73.3	
DV-6	775.56	68.25	32.61	742.95	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-7	829.62	86.90	83.07	746.55	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	4.30	724.43	5.9	3.2	18.4	0.336	3	0.265	0.365	0.00	92.7	
DV-9	723.56	22.40	7.33	716.23	2.6	1.4	19.3	0.336	2	0.177	0.243	0.00	91.0	
DV-10	765.05	67.40	42.21	722.84	2.9	1.4	19.4	0.336	3	0.265	0.365	0.00	94.9	
DV-11	753.50	34.75	9.42	744.08	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	26.63	719.66	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	17.78	720.44	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	36.17	700.00	22.1	12.0	13.6	0.336	10	0.884	1.216	0.00	80.4	
DV-16	733.85	34.00	24.72	709.13	69.0	31.0	0.0	0.336	82	7.246	9.968	2.20	72.0	
DV-17	729.07	37.20	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Could not locate vent due to excessive vegetation
DV-18	775.13	54.20	32.21	742.92	67.4	32.5	0.0	0.336	49	4.330	5.956	3.20	84.5	
EW-1	753.98	43.85	29.23	724.75	65.2	34.8	0.0	NA	NA	NA	NA	0.24	84.7	Vault counter 30192
EW-1A	752.22	42.50	36.98	715.24	56.5	28.0	0.0	NA	NA	NA	NA	0.02	89.8	Vault counter 901260
EW-2	792.24	81.50	54.41	737.83	62.0	37.8	0.0	NA	NA	NA	NA	0.04	93.2	Vault counter 865847
EW-3	768.36	62.40	35.34	733.02	66.4	33.6	0.0	NA	NA	NA	NA	0.02	82.8	Vault counter 702850
EW-4	835.30	NA	NA	NA	70.9	29.0	0.0	NA	NA	NA	NA	0.00	73.2	Vault counter 289460
EW-5	808.92	89.90	79.15	729.77	76.7	23.3	0.0	NA	NA	NA	NA	0.00	81.7	Vault counter 139172
EW-6	764.73	64.60	41.60	723.13	69.1	30.9	0.0	NA	NA	NA	NA	0.78	72.7	Vault counter 921676
EW-7	772.83	63.10	57.64	715.19	68.5	31.5	0.0	NA	NA	NA	NA	2.30	67.1	Vault counter 494072
EW-8	756.16	43.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Vault counter 1292__ Last 2 digits not readable

- Notes:
- 1) TOC - Top of Casing (EW as of 05/09/07)
 - 2) O₂ - Oxygen Percentage
 - 3) CH₄ - Methane Percentage
 - 4) CO₂ - Carbon Dioxide Percentage
 - 5) NA - Not analyzed as part of O&M
 - 6) NM - Not measured for specific date

Main Vent	54.4	29.3	2.2	0.505	290	58.06	79.869	NA	75.6	No static pressure because vent stack is open to the atmosphere
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No velocity in lift stations or extraction wells due pipe size constrictions

TOTAL VOLUME (ft³/min)= 72.69

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH ₄	% CO ₂	% O ₂	counter = 238250
LS01	NA	0.7	4.9	19.3	p=0.00

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 9/10/2008
Time: 0800-1400
Monitored By: JEF/ACB

Temperature(° F): 73
Humidity (%): 63%
Barometric Pressure (in. Hg): 30.23

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH ₄	%CO ₂	%O ₂	I.D. (ft)	Velocity (fpm)	Volume (ft ³ /min)	% of Total	Static Pressure (in. H ₂ O)	Temperature (°F)	
SV-1	739.39	16.00	5.32	734.07	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.52	741.52	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	15.00	726.36	0.2	0.2	20.7	0.172	1	0.023	0.031	0.01	82.7	
SV-5	725.74	27.00	12.10	713.64	5.0	4.1	18.5	0.172	6	0.140	0.189	0.00	78.7	
SV-6	760.46	45.70	29.61	730.85	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.40	729.61	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-8	723.03	25.20	6.35	716.68	4.7	3.3	18.8	0.172	2	0.047	0.063	0.00	58.4	
SV-9	748.77	50.00	35.34	713.43	48.3	27.8	3.7	0.172	27	0.629	0.850	1.40	57.6	
SV-11	807.38	91.40	69.99	737.39	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	62.43	761.39	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.29	36.75	16.93	732.36	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	22.57	700.68	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	12.64	707.71	41.9	25.2	5.4	0.172	85	1.980	2.677	0.04	58.4	Dry - elevation represents bottom of well
DV-6	775.56	68.25	32.47	743.09	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-7	829.62	86.90	82.85	746.77	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-8	728.73	27.60	6.84	721.89	1.4	1.3	20.1	0.336	2	0.177	0.239	0.00	78.7	
DV-9	723.56	22.40	9.58	713.98	6.8	5.8	16.3	0.336	1	0.088	0.119	0.00	83.4	
DV-10	765.05	67.40	43.47	721.58	0.1	0.1	20.7	0.336	3	0.265	0.358	0.00	85.2	
DV-11	753.50	34.75	8.59	744.91	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	27.31	718.98	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	17.96	720.26	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	37.12	699.05	28.3	17.4	10.4	0.336	32	2.828	3.824	0.03	61.8	
DV-16	733.85	34.00	27.31	706.54	65.2	34.7	0.0	0.336	47	4.153	5.616	1.60	59.3	
DV-17	729.07	37.20	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Could not locate vent due to excessive vegetation
DV-18	775.13	54.20	32.39	742.74	58.9	33.7	1.0	0.336	29	2.562	3.465	2.40	77.6	
EW-1	753.98	43.85	31.80	722.18	61.5	37.5	0.0	NA	NA	NA	NA	0.28	74.4	Vault counter 32942
EW-1A	752.22	42.50	38.45	713.77	47.0	25.8	0.0	NA	NA	NA	NA	0.04	66.8	Vault counter 901615
EW-2	792.24	81.50	66.24	726.00	61.8	37.1	0.2	NA	NA	NA	NA	0.12	76.0	Vault counter 885542
EW-3	768.36	62.40	36.61	731.75	64.6	34.8	0.0	NA	NA	NA	NA	0.06	79.0	Vault counter 702864
EW-4	835.30	NA	NA	NA	67.5	29.3	0.0	NA	NA	NA	NA	0.10	63.6	Vault counter 292629
EW-5	808.92	89.90	80.10	728.82	74.2	25.6	0.0	NA	NA	NA	NA	0.04	67.6	Vault counter 169959
EW-6	764.73	64.60	41.28	723.45	66.3	34.6	0.0	NA	NA	NA	NA	0.90	64.1	Vault counter 921676
EW-7	772.83	63.10	57.76	715.07	65.3	35.4	0.0	NA	NA	NA	NA	2.20	63.0	Vault counter 537036
EW-8	756.16	43.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Vault counter 1292__ Last 2 digits not readable

- Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O₂ - Oxygen Percentage
3) CH₄ - Methane Percentage
4) CO₂ - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date

Main Vent	51.8	29.2	2.0	0.505	305	61.06	82.568	NA	59.4	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions
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TOTAL VOLUME (ft³/min)= 73.95

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH ₄	% CO ₂	% O ₂	counter = 238290
LS01	NA	0.8	9.5	16.9	p=0.00

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 11/19/2008
Time: 0800-1530
Monitored By: JEF/DLA

Temperature(° F): 45
Humidity (%): 56%
Barometric Pressure (in. Hg): 30.05

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH ₄	%CO ₂	%O ₂	I.D. (ft)	Velocity (fpm)	Volume (ft ³ /min)	% of Total	Static Pressure (in. H ₂ O)	Temperature (°F)	
SV-1	739.39	16.00	5.12	734.27	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well Gas readings could not be collected due to equipment failure.
SV-2	766.04	53.25	24.78	741.26	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-4	741.36	27.15	13.19	728.17	NM	NM	NM	0.172	4	0.093	0.076	0.00	49.6	
SV-5	725.74	27.00	2.98	722.76	0.1	0.2	22.6	0.172	1	0.023	0.019	0.00	51.2	
SV-6	760.46	45.70	31.60	728.86	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	49.07	731.94	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	723.03	25.20	5.44	717.59	7.9	5.6	19.4	0.172	6	0.140	0.114	0.00	39.3	
SV-9	748.77	50.00	34.95	713.82	54.6	33.6	3.5	0.172	20	0.466	0.379	0.00	40.6	
SV-11	807.38	91.40	70.00	737.38	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	62.35	761.47	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.29	36.75	16.20	733.09	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	20.62	702.63	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	12.62	707.73	59.2	32.5	2.5	0.172	110	2.562	2.084	0.00	40.7	
DV-6	775.56	68.25	32.64	742.92	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-7	829.62	86.90	83.20	746.42	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	1.68	727.05	0.2	0.3	21.9	0.336	0	0.000	0.000	0.00	46.2	
DV-9	723.56	22.40	0.32	723.24	0.0	0.3	22.4	0.336	2	0.177	0.144	0.00	53.5	
DV-10	765.05	67.40	41.49	723.56	NM	NM	NM	0.336	8	0.707	0.575	0.00	48.2	Gas readings could not be collected due to equipment failure.
DV-11	753.50	34.75	7.05	746.45	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	24.01	722.28	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	15.46	722.76	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	35.63	700.54	56.6	32.2	3.0	0.336	53	4.683	3.810	0.00	43.4	
DV-16	733.85	34.00	25.68	708.17	62.8	37.1	0.0	0.336	115	10.161	8.267	0.01	40.9	
DV-17	729.07	37.20	13.42	715.65	1.1	1.1	22.6	0.336	1	0.088	0.072	0.00	39.0	
DV-18	775.13	54.20	29.97	745.16	62.7	37.2	0.1	0.336	42	3.711	3.019	0.00	45.9	
EW-1	753.98	43.85	30.81	723.17	59.0	40.3	0.3	NA	NA	NA	NA	0.00	54.5	Vault counter 63503
EW-1A	752.22	42.50	38.37	713.85	3.5	2.9	20.7	NA	NA	NA	NA	0.00	53.1	Vault counter 905311
EW-2	792.24	81.50	58.22	734.02	57.9	35.2	0.2	NA	NA	NA	NA	0.00	50.1	Vault counter 899708
EW-3	768.36	62.40	40.16	728.20	63.3	36.3	0.0	NA	NA	NA	NA	0.00	47.8	Vault counter 768077
EW-4	835.30	NA	NA	NA	67.8	31.8	0.2	NA	NA	NA	NA	0.00	52.5	Vault counter 295938
EW-5	808.92	89.90	77.48	731.44	67.8	27.7	0.0	NA	NA	NA	NA	0.00	48.1	Vault counter 194675
EW-6	764.73	64.60	40.80	723.93	62.7	36.8	0.0	NA	NA	NA	NA	0.00	57.5	Vault counter 921676
EW-7	772.83	63.10	55.96	716.87	62.5	37.4	0.0	NA	NA	NA	NA	0.01	54.6	Vault counter 562765
EW-8	756.16	43.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Vault counter 1292__ Last 2 digits not readable

- Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O₂ - Oxygen Percentage
3) CH₄ - Methane Percentage
4) CO₂ - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date

Main Vent	59.2	33.6	0.3	0.505	500	100.10	81.440	NA	44.9	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due pipe size constrictions				
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TOTAL VOLUME (ft³/min)= 122.91

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH ₄	% CO ₂	% O ₂	counter = 238290 p=0.00
LS01	NA	0.0	1.3	20.8	

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 1/21/2009
Time: 0800 - 1500
Monitored By: JEF/ACB

Temperature(° F): 28
Humidity (%): 74%
Barometric Pressure (in. Hg): 29.99

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH ₄	%CO ₂	%O ₂	I.D. (ft)	Velocity (fpm)	Volume (ft ³ /min)	% of Total	Static Pressure (in. H ₂ O)	Temperature (°F)	
SV-1	739.39	16.00	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to frozen vault
SV-2	766.04	53.25	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to frozen vault
SV-4	741.36	27.15	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to frozen vault
SV-5	725.74	27.00	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to frozen vault
SV-6	760.46	45.70	31.72	728.74	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	49.41	731.60	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	723.03	25.20	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to frozen vault
SV-9	748.77	50.00	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to frozen vault
SV-11	807.38	91.40	69.71	737.67	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	NM	NM	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-3	749.29	36.75	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-4	723.25	27.10	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-5	720.35	29.00	12.59	707.76	3.9	2.0	0.0	0.172	9	0.210	0.177	NM	24.6	
DV-6	775.56	68.25	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-7	829.62	86.90	83.04	746.58	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to frozen vault
DV-9	723.56	22.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to frozen vault
DV-10	765.05	67.40	43.60	721.45	7.5	4.9	0.0	0.336	145	12.812	10.846	NM	26.4	
DV-11	753.50	34.75	NM	NM	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-13	746.29	53.60	NM	NM	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-14	738.22	33.10	NM	NM	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Not measured due to frozen vault
DV-15	736.17	43.00	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to frozen vault
DV-16	733.85	34.00	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to frozen vault
DV-17	729.07	37.20	12.75	716.32	8.7	4.8	0.0	0.336	0	0.000	0.000	NM	20.8	
DV-18	775.13	54.20	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to vault being frozen shut
EW-1	753.98	43.85	NM	NM	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter NM Not measured due to frozen vault
EW-1A	752.22	42.50	38.37	713.85	60.7	27.9	0.0	NA	NA	NA	NA	NM	47.4	Vault counter 916923
EW-2	792.24	81.50	55.36	736.88	58.7	39.9	12.3	NA	NA	NA	NA	NM	38.5	Vault counter 919528
EW-3	768.36	62.40	43.39	724.97	68.8	40.6	12.3	NA	NA	NA	NA	NM	37.0	Vault counter 8320591
EW-4	835.30	NA	NA	NA	70.4	0.0	12.3	NA	NA	NA	NA	NM	43.0	Vault counter 2984061
EW-5	808.92	89.90	77.23	731.69	71.8	31.3	12.3	NA	NA	NA	NA	NM	38.1	Vault counter 223582
EW-6	764.73	64.60	40.38	724.35	69.1	39.9	12.3	NA	NA	NA	NA	NM	55.2	Vault counter 921676
EW-7	772.83	63.10	52.90	719.93	58.5	40.5	12.3	NA	NA	NA	NA	NM	47.2	Vault counter 583063
EW-8	756.16	43.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Vault counter 1292__ Last 2 digits not readable

- Notes:
- 1) TOC - Top of Casing (EW as of 05/09/07)
 - 2) O₂ - Oxygen Percentage
 - 3) CH₄ - Methane Percentage
 - 4) CO₂ - Carbon Dioxide Percentage
 - 5) NA - Not analyzed as part of O&M
 - 6) NM - Not measured for specific date
 - 7) Pressure measurements not collected because rental company did not send proper instrument.

Main Vent	64.1	34.7	12.3	0.505	525	105.10	88.976	NA	26.0
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No static pressure because vent stack is open to the atmosphere
No velocity in lift stations or extraction wells due pipe size constrictions

TOTAL VOLUME (ft³/min)= 118.12

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH ₄	% CO ₂	% O ₂	counter = NM
LS01	NA	NM	NM	NM	p = NM

LS01 not measured due to frozen vault

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 3/9/2009
Time: 0730 - 1300
Monitored By: JEF/TPC

Temperature(° F): 46
Humidity (%): 77%
Barometric Pressure (in. Hg): 30.15

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH ₄	%CO ₂	%O ₂	I.D. (ft)	Velocity (fpm)	Volume (ft ³ /min)	% of Total	Static Pressure (in. H ₂ O)	Temperature (°F)	
SV-1	739.39	16.00	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to flooded vault
SV-2	766.04	53.25	24.73	741.31	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to flooded vault
SV-5	725.74	27.00	1.46	724.28	0.0	0.2	21.0	0.172	1	0.023	0.046	0.00	55.1	
SV-6	760.46	45.70	30.26	730.20	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	49.58	731.43	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	723.03	25.20	2.19	720.84	0.1	0.4	20.6	0.172	2	0.047	0.092	0.00	37.5	
SV-9	748.77	50.00	33.73	715.04	54.7	30.4	2.9	0.172	22	0.512	1.017	0.00	37.4	
SV-11	807.38	91.40	69.45	737.93	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	62.24	761.58	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.29	36.75	15.78	733.51	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to flooded vault
DV-5	720.35	29.00	11.30	709.05	5.9	3.6	18.0	0.172	19	0.443	0.878	0.00	37.6	
DV-6	775.56	68.25	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to flooded vault
DV-7	829.62	86.90	83.38	746.24	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	1.31	727.42	0.0	0.2	20.4	0.336	0	0.000	0.000	0.00	52.2	
DV-9	723.56	22.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-10	765.05	67.40	35.10	729.95	6.5	3.7	19.1	0.336	15	1.325	2.629	0.00	55.0	
DV-11	753.50	34.75	NM	NM	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Not measured due to flooded vault
DV-13	746.29	53.60	22.09	724.20	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	10.75	727.47	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-16	733.85	34.00	9.68	724.17	56.6	32.9	1.4	0.336	241	21.295	42.245	0.00	38.6	
DV-17	729.07	37.20	1.14	727.93	1.1	0.9	20.2	0.336	1	0.088	0.175	0.00	37.7	
DV-18	775.13	54.20	25.70	749.43	63.9	33.1	0.2	0.336	30	2.651	5.259	0.00	44.4	
EW-1	753.98	43.85	30.62	723.36	61.9	54.4	0.2	NA	NA	NA	NA	0.00	49.5	Vault counter 107192
EW-1A	752.22	42.50	NM	NM	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter NM Not measured due to flooded vault
EW-2	792.24	81.50	58.77	733.47	64.9	33.0	0.5	NA	NA	NA	NA	0.00	50.2	Vault counter 934937
EW-3	768.36	62.40	39.07	729.29	65.7	31.8	0.1	NA	NA	NA	NA	0.00	45.8	Vault counter 878479
EW-4	835.30	NA	NA	NA	72.8	26.2	0.0	NA	NA	NA	NA	0.00	40.8	Vault counter 300646
EW-5	808.92	89.90	65.84	743.08	0.0	0.2	20.0	NA	NA	NA	NA	0.00	42.3	Vault counter 240843
EW-6	764.73	64.60	40.25	724.48	66.2	32.7	0.9	NA	NA	NA	NA	0.00	52.1	Vault counter 921676
EW-7	772.83	63.10	54.02	718.81	65.6	34.2	1.1	NA	NA	NA	NA	0.00	51.0	Vault counter 596762
EW-8	756.16	43.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Vault counter 1292__ Last 2 digits not readable

- Notes:
- 1) TOC - Top of Casing (EW as of 05/09/07)
 - 2) O₂ - Oxygen Percentage
 - 3) CH₄ - Methane Percentage
 - 4) CO₂ - Carbon Dioxide Percentage
 - 5) NA - Not analyzed as part of O&M
 - 6) NM - Not measured for specific date
 - 7) Static Pressure measurements may be inaccurate due to apparent equipment malfunction.

Main Vent	60.6	31.1	0.9	0.505	120	24.02	47.658	NA	39.2
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No static pressure because vent stack is open to the atmosphere
No velocity in lift stations or extraction wells due pipe size constrictions

TOTAL VOLUME (ft³/min)= 50.41

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH ₄	% CO ₂	% O ₂	counter = 238290
LS01	NA	0.0	2.1	18.9	p = 0.0

APPENDIX B

LEACHATE ANALYTICAL RESULTS AND WASTE DISPOSAL PERMIT

CORRECTED PERMIT

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT**

LOG NUMBERS: 3767-05

PERMIT NO.: 2005-EE-3767

**FINAL PLANS, SPECIFICATIONS, APPLICATION
AND SUPPORTING DOCUMENTS
PREPARED BY:**

DATE ISSUED: April 25, 2005

CORRECTION

DATE: May 2, 2005

SUBJECT: FOREST PRESERVE DISTRICT OF DUPAGE COUNTY - Blackwell Landfill – Leachate Disposal –
Tributary to Wheaton Sanitary District STP

PERMITTEE TO OWN AND OPERATE

Forest Preserve District of DuPage County
3 South 580 Naperville Road
Wheaton, IL 60187-8761

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows:

Hauling via tanker truck of 10,000 gallons per day DMF of landfill leachate from Blackwell Landfill for discharge into the headworks of Wheaton Sanitary District STP for treatment.

This operating permit expires on March 31, 2010.

This permit renews and replaces Permit Number 2000-EE-0837 which was previously issued for the herein permitted facilities.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

SPECIAL CONDITION 1: All sludges generated on-site shall be transported for disposal at an Illinois Environmental Protection Agency permitted facility using the Agency's Supplemental Permit and manifest system in accordance with the Environmental Protection Act. If the sludge is a hazardous waste, the generator must comply with all applicable requirements of 35 Ill. Adm. Code Parts 702, 703, 705 and 720 to 725.

Page 1 of 3

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

SAK:BMB:J:\statecon\burkard\376705.bmb

DIVISION OF WATER POLLUTION CONTROL

cc: EPA - Des Plaines FOS
Wheaton Sanitary District
Records - Municipal
Records - Industrial
Binds

Alan Keller
Alan Keller, P.E.
Manager, Permit Section

CORRECTED PERMIT

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT**

LOG NUMBERS: 3767-05

PERMIT NO.: 2005-EE-3767

**FINAL PLANS, SPECIFICATIONS, APPLICATION
AND SUPPORTING DOCUMENTS
PREPARED BY:**

DATE ISSUED: April 25, 2005

CORRECTION

DATE: May 2, 2005

SUBJECT: FOREST PRESERVE DISTRICT OF DUPAGE COUNTY - Blackwell Landfill -- Leachate Disposal --
Tributary to Wheaton Sanitary District STP

SPECIAL CONDITION 2:

- a. Liquids, solids, or gases which by reason of their nature or quantity may cause fire or explosion; or be injurious in any other way to sewers, treatment works, or cause a safety hazard to the personnel operating the treatment works, or cause the effluent from the treatment works to violate applicable effluent standards are prohibited;
- b. Solid or viscous wastes which cause obstruction to the flow in sewers or other interference with the proper operation of any sewer or treatment works are prohibited.

SPECIAL CONDITION 3: The issuance of this permit does not relieve the permittee of the responsibility of complying with 35 Ill. Adm. Code, Part 307 and/or the General Pretreatment Regulations (40 CFR 403) and any guidelines developed pursuant to Section 301, 306, or 307 of the Federal Clean Water Act of 1977.

SPECIAL CONDITION 4: The issuance of this permit does not relieve the permittee of the responsibility of complying with any limitations and provisions imposed by the Wheaton Sanitary District.

SPECIAL CONDITION 5: This permit is being issued with the express understanding that the transportation of wastewater to the publicly owned treatment works for treatment will be done in accordance with the following IEPA Bureau of Land requirements:

These regulations as identified in 35 Ill. Adm. Code 809, state that the generator may not give the waste to a hauler unless the hauler has obtained an Illinois special waste hauler license; the hauler may not accept the waste unless it is accompanied by the required manifest; and the receiving facility cannot accept the waste unless it is delivered by a licensed special waste hauler or exempt hauler, accompanied by the required manifest and the receiving facility has obtained the required permits to receive the waste.

The authorization number is no longer issued by this Agency. Therefore, you will no longer be required to identify the authorization number on the manifest when shipping waste as authorized by this permit.

CORRECTED PERMIT

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT**

LOG NUMBERS: 3767-05

PERMIT NO.: 2005-EE-3767

**FINAL PLANS, SPECIFICATIONS, APPLICATION
AND SUPPORTING DOCUMENTS
PREPARED BY:**

DATE ISSUED: April 25, 2005
CORRECTION
DATE: May 2, 2005

SUBJECT: FOREST PRESERVE DISTRICT OF DUPAGE COUNTY - Blackwell Landfill -- Leachate Disposal --
Tributary to Wheaton Sanitary District STP

SPECIAL CONDITION 6: MONITORING AND REPORTING REQUIREMENTS

- a. A representative truck load of leachate shall be sampled and analyzed prior to discharge into the Wheaton Sanitary District Sewage Treatment Plant for the following parameters on a quarterly basis (once every three months):

Arsenic	Nickel
Barium	pH
Boron	Phenols
Cadmium	Selenium
Chloride	Silver
Chromium (hexavalent)	Sulfate
Chromium (trivalent)	Zinc
Copper	BOD5
Cyanide	COD
Iron (total)	Oil and Grease
Lead	Ammonia (as N)
Manganese	Total Dissolved Solids
Mercury	Total Suspended Solids

The discharge shall also be sampled semiannually for organic toxic pollutants (Volatiles, Acid Compounds, Base/Neutrals, and Pesticides, as defined in 40 CFR 122).

- b. Grab samples shall be utilized. Quarterly sampling shall be performed within the first two months of each quarter. Semiannual sampling shall be performed within the first five months of each six-month period. Test methods as described in 40 CFR 136 shall be utilized when analyzing wastewater.
- c. Sampling results shall be submitted in the third month of each quarter to the Agency at the following addresses (semiannual sampling results shall be submitted upon your receipt):

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 East North Grand Avenue
P.O. Box 19276
Springfield, IL 62794-9276

Illinois Environmental Protection Agency
DWPC - Des Plaines Region
9511 West Harrison
Des Plaines, IL 60016



**First
Environmental
Laboratories, Inc.**

IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

May 22, 2008

Mr. Justin Finger

MONTGOMERY WATSON HARZA

175 West Jackson Boulevard,

Suite 1900

Chicago, IL 60604

Project ID: Blackwell PO# 4050581.088101

First Environmental File ID: 8-2049

Date Received: May 14, 2008

Dear Mr. Justin Finger:

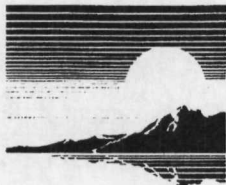
The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002045: effective 05/14/08 through 02/28/09.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager



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IL ELAP / NELAC Accreditation # 100292

Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell PO# 4050581.088101**

First Environmental File ID: **8-2049**

Date Received: **May 14, 2008**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

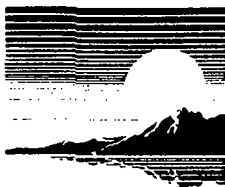
Sample acceptance criteria were met.

Method Comments

Lab Number **Sample ID**
8-2049-002 BW-LCS-43

Comments:

Semi-Volatile Compounds
Surrogate recovery outside control limits; low bias due to matrix interference.



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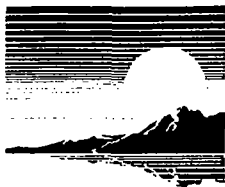
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell PO# 4050581.088101
Sample ID: Trip Blank
Sample No: 8-2049-001

Date Collected: 05/14/08
Time Collected: 8:00
Date Received: 05/14/08
Date Reported: 05/22/08

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds		Method: 5030B/8260B		
Analysis Date: 05/20/08				
Acetone	< 100	100	ug/L	
Benzene	< 5.0	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	< 10.0	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	< 5.0	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell PO# 4050581.088101
Sample ID: BW-LCS-43
Sample No: 8-2049-002

Date Collected: 05/14/08
Time Collected: 8:30
Date Received: 05/14/08
Date Reported: 05/22/08

Analyte	Result	R.L.	Units	Date Analyzed	Method	Flag
Phenols	0.07	0.01	mg/L	05/20/08	420.1	
Total Suspended Solids	87	1	mg/L	05/16/08	2540D	
Total Dissolved Solids	1,210	10	mg/L	05/15/08	2540C	
pH @ 25°C	7.04		Units	05/14/08 14:45	4500H+,B	
COD	110	10	mg/L	05/16/08	5220D	
BOD, 5 Day	29	1	mg/L	05/14/08 15:30	5210B	
Oil & Grease	14	1	mg/L	05/14/08	1664A	
Ammonia (as N)	510	0.10	mg/L	05/19/08	350.1R2.0	
Cyanide, Total	< 0.005	0.005	mg/L	05/19/08	4500CN,C,E	



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1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell PO# 4050581.088101
Sample ID: BW-LCS-43
Sample No: 8-2049-002

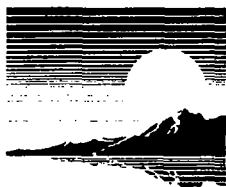
Date Collected: 05/14/08
Time Collected: 8:30
Date Received: 05/14/08
Date Reported: 05/22/08

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds		Method: 5030B/8260B		
Analysis Date: 05/20/08				
Acetone	< 100	100	ug/L	
Benzene	< 5.0	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	< 10.0	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	8.4	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	8.1	5.0	ug/L	

Semi-Volatile Compounds
Analysis Date: 05/21/08

Method: 8270C

Preparation Method 3510C
Preparation Date: 05/16/08



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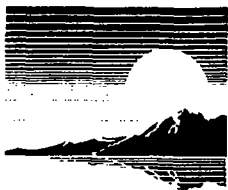
IL ELAP / NELAC Accreditation # 100292

Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell PO# 4050581.088101
Sample ID: BW-LCS-43
Sample No: 8-2049-002

Date Collected: 05/14/08
Time Collected: 8:30
Date Received: 05/14/08
Date Reported: 05/22/08

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 05/21/08		Preparation Method 3510C		
		Preparation Date: 05/16/08		
Acenaphthene	< 10	10	ug/L	
Acenaphthylene	< 10	10	ug/L	
Anthracene	< 10	10	ug/L	
Benzidine	< 10	10	ug/L	
Benzo(a)anthracene	< 10	10	ug/L	
Benzo(a)pyrene	< 10	10	ug/L	
Benzo(b)fluoranthene	< 10	10	ug/L	
Benzo(ghi)perylene	< 10	10	ug/L	
Benzo(k)fluoranthene	< 10	10	ug/L	
Benzoic acid	< 50	50	ug/L	
Benzyl alcohol	< 20	20	ug/L	
bis(2-Chloroethoxy)methane	< 10	10	ug/L	
bis(2-Chloroethyl)ether	< 10	10	ug/L	
bis(2-Chloroisopropyl)ether	< 10	10	ug/L	
bis(2-Ethylhexyl)phthalate	< 5	5	ug/L	
4-Bromophenyl phenyl ether	< 10	10	ug/L	
Butyl benzyl phthalate	< 10	10	ug/L	
Carbazole	< 10	10	ug/L	
4-Chloroaniline	< 10	10	ug/L	
4-Chloro-3-methylphenol	< 20	20	ug/L	
2-Chloronaphthalene	< 10	10	ug/L	
2-Chlorophenol	< 10	10	ug/L	
4-Chlorophenyl phenyl ether	< 10	10	ug/L	
Chrysene	< 10	10	ug/L	
Di-n-butyl phthalate	< 10	10	ug/L	
Di-n-octylphthalate	< 10	10	ug/L	
Dibenzo(a,h)anthracene	< 10	10	ug/L	
Dibenzofuran	< 10	10	ug/L	
1,2-Dichlorobenzene	< 10	10	ug/L	
1,3-Dichlorobenzene	< 10	10	ug/L	
1,4-Dichlorobenzene	< 10	10	ug/L	
3,3'-Dichlorobenzidine	< 20	20	ug/L	
2,4-Dichlorophenol	< 10	10	ug/L	
Diethyl phthalate	< 10	10	ug/L	
2,4-Dimethylphenol	< 10	10	ug/L	
Dimethyl phthalate	< 10	10	ug/L	
4,6-Dinitro-2-methylphenol	< 50	50	ug/L	
2,4-Dinitrophenol	< 10	10	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell PO# 4050581.088101
Sample ID: BW-LCS-43
Sample No: 8-2049-002

Date Collected: 05/14/08
Time Collected: 8:30
Date Received: 05/14/08
Date Reported: 05/22/08

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds				
Method: 8270C		Preparation Method 3510C		
Analysis Date: 05/21/08		Preparation Date: 05/16/08		
2,4-Dinitrotoluene	< 10	10	ug/L	
2,6-Dinitrotoluene	< 10	10	ug/L	
Fluoranthene	< 10	10	ug/L	
Fluorene	< 10	10	ug/L	
Hexachlorobenzene	< 10	10	ug/L	
Hexachlorobutadiene	< 10	10	ug/L	
Hexachlorocyclopentadiene	< 10	10	ug/L	
Hexachloroethane	< 5	5	ug/L	
Indeno(1,2,3-cd)pyrene	< 10	10	ug/L	
Isophorone	< 10	10	ug/L	
2-Methylnaphthalene	< 10	10	ug/L	
2-Methylphenol	< 10	10	ug/L	
3 & 4-Methylphenol	< 10	10	ug/L	
Naphthalene	< 10	10	ug/L	
2-Nitroaniline	< 50	50	ug/L	
3-Nitroaniline	< 50	50	ug/L	
4-Nitroaniline	< 20	20	ug/L	
Nitrobenzene	< 10	10	ug/L	
2-Nitrophenol	< 10	10	ug/L	
4-Nitrophenol	< 50	50	ug/L	
n-Nitrosodimethylamine	< 10	10	ug/L	
n-Nitrosodi-n-propylamine	< 10	10	ug/L	
n-Nitrosodiphenylamine	< 10	10	ug/L	
Pentachlorophenol	< 10	10	ug/L	
Phenanthrene	< 10	10	ug/L	
Phenol	< 10	10	ug/L	
Pyrene	< 10	10	ug/L	
1,2,4-Trichlorobenzene	< 10	10	ug/L	
2,4,5-Trichlorophenol	< 10	10	ug/L	
2,4,6-Trichlorophenol	< 10	10	ug/L	
Pesticides				
Method: 8081A		Preparation Method 3510C		
Analysis Date: 05/21/08		Preparation Date: 05/19/08		
Aldrin	< 0.05	0.05	ug/L	
alpha-BHC	< 0.05	0.05	ug/L	
beta-BHC	< 0.05	0.05	ug/L	
delta-BHC	< 0.05	0.05	ug/L	
gamma-BHC (Lindane)	< 0.05	0.05	ug/L	
alpha-Chlordane	< 0.50	0.50	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell PO# 4050581.088101
Sample ID: BW-LCS-43
Sample No: 8-2049-002

Date Collected: 05/14/08
Time Collected: 8:30
Date Received: 05/14/08
Date Reported: 05/22/08

Analyte	Result	R.L.	Units	Flags
Pesticides				
Method: 8081A		Preparation Method 3510C		
Analysis Date: 05/21/08		Preparation Date: 05/19/08		
gamma-Chlordane	< 0.50	0.50	ug/L	
4,4'-DDD	< 0.10	0.10	ug/L	
4,4'-DDE	< 0.10	0.10	ug/L	
4,4'-DDT	< 0.10	0.10	ug/L	
Dieldrin	< 0.10	0.10	ug/L	
Endosulfan I	< 0.05	0.05	ug/L	
Endosulfan II	< 0.10	0.10	ug/L	
Endosulfan sulfate	< 0.10	0.10	ug/L	
Endrin	< 0.10	0.10	ug/L	
Endrin aldehyde	< 0.10	0.10	ug/L	
Endrin ketone	< 0.10	0.10	ug/L	
Heptachlor	< 0.05	0.05	ug/L	
Heptachlor epoxide	< 0.05	0.05	ug/L	
Methoxychlor	< 0.50	0.50	ug/L	
Toxaphene	< 1.0	1.0	ug/L	
Total Metals				
Method: 7470A				
Analysis Date: 05/20/08				
Mercury	< 0.0005	0.0005	mg/L	
Total Metals				
Method: 6010B		Preparation Method 3010A		
Analysis Date: 05/20/08		Preparation Date: 05/15/08		
Arsenic	0.006	0.002	mg/L	
Barium	0.228	0.001	mg/L	
Cadmium	< 0.001	0.001	mg/L	
Chromium	0.001	0.001	mg/L	
Lead	0.002	0.002	mg/L	
Selenium	< 0.002	0.002	mg/L	
Silver	< 0.001	0.001	mg/L	
Boron	0.44	0.01	mg/L	
Copper	0.002	0.001	mg/L	
Iron	19.1	0.01	mg/L	
Manganese	0.301	0.001	mg/L	
Nickel	0.006	0.001	mg/L	
Zinc	0.516	0.005	mg/L	

Page 1 1 pgs

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Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292**

Sampled By: J. FINGER / A. BUTLER

[illegible]

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes ☒ No. 24 °C

Received within 6 hrs. of collection: _____

Ice Present: Yes ☐ No ☒

Sample Refrigerated: Yes__ No__

Refrigerator Temperature: _____ °C

5035 Vials Frozen: Yes___ No___

Freezer Temperature: _____ °C

Containers Received Preserved: ☐ Yes ☐ No**Notes and Special Instructions:****Relinquished By:**

Date/Time 5/14/08 1155

Received By:

Date/Time

Relinquished By:

Date/Time

Received By:

Date/Time



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IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

September 08, 2008

Mr. Justin Finger
MONTGOMERY WATSON HARZA
175 West Jackson Boulevard,
Suite 1900
Chicago, IL 60604

Project ID: Blackwell # 4050581.098101
First Environmental File ID: 8-3895
Date Received: August 27, 2008

Dear Mr. Justin Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002045: effective 05/14/08 through 02/28/09.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager



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Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell # 4050581.098101**

First Environmental File ID: **8-3895**

Date Received: **August 27, 2008**

<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.



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Analytical Report

Client: MONTGOMERY WATSON HARZA

Date Collected: 08/27/08

Project ID: Blackwell # 4050581.098101

Time Collected: 9:30

Sample ID: BW-LCS-44

Date Received: 08/27/08

Sample No: 8-3895-001

Date Reported: 09/08/08

Analyte	Result	R.L.	Units	Date Analyzed	Method	Flag
Cyanide, Total	0.006	0.005	mg/L	09/04/08	4500CN,C,E	
pH @ 25°C	7.34		Units	08/27/08 16:00	4500H+,B	
Phenols	0.09	0.01	mg/L	09/08/08	420.1	
COD	744	10	mg/L	09/02/08	5220D	
BOD, 5 Day	70	1	mg/L	08/27/08 16:30	5210B	
Oil & Grease	6	1	mg/L	08/29/08	1664A	P
Ammonia (as N)	334	0.10	mg/L	09/05/08	350.1R2.0	
Total Dissolved Solids	5,020	10	mg/L	08/27/08	2540C	
Total Suspended Solids	30	1	mg/L	08/29/08	2540D	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell # 4050581.098101
Sample ID: BW-LCS-44
Sample No: 8-3895-001

Date Collected: 08/27/08
Time Collected: 9:30
Date Received: 08/27/08
Date Reported: 09/08/08

Analyte	Result	R.L.	Units	Flags
Total Metals				
Method: 6010B		Preparation Method 3010A		
Analysis Date: 09/02/08		Preparation Date: 08/29/08		
Arsenic	0.008	0.002	mg/L	
Barium	0.401	0.001	mg/L	
Boron	2.31	0.01	mg/L	
Cadmium	< 0.001	0.001	mg/L	
Chromium	0.011	0.001	mg/L	
Copper	0.001	0.001	mg/L	
Iron	6.89	0.01	mg/L	
Lead	< 0.002	0.002	mg/L	
Manganese	0.185	0.001	mg/L	
Nickel	0.052	0.001	mg/L	
Selenium	< 0.002	0.002	mg/L	
Silver	< 0.001	0.001	mg/L	
Zinc	0.127	0.005	mg/L	
Total Metals				
Method: 7470A				
Analysis Date: 09/02/08				
Mercury	< 0.0005	0.0005	mg/L	



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Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

Company Name: MWH

Street Address: 175 W. JACKSON BLVD SUITE 1900

City: CHICAGO

State: IL Zip: 60604

Phone: (312) 831-3000 Fax: (312) 831-3021

e-mail: Justin.E.Fisher@nasa.gov

Send Report To: J. FINGER

Via: Fax ☐ e-mail ☒

Sampled By: J. DWIGHT

[illegible]

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes ☒ No. ☐ _____ °C

Received within 6 hrs. of collection: _____

Ice Present: Yes ☐ No ☒

Sample Refrigerated: Yes__ No__

Refrigerator Temperature: _____ °C

5035 Vials Frozen: Yes__ No__

Freezer Temperature: _____ °C

Containers Received Preserved: ☒ Yes ☐ No

Notes and Special Instructions:

Relinquished By:

Date/Time

8/27/08 1025

Received By:

Date/Time

8/27/08 1025

Relinquished By:

Date/Time

Received By:

Date/Time

Rev. 4/74

3 PAGE: 0025 R=96%

ID:

FAX: 630 778 1233

SEP-08-2008 01:10PM



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December 03, 2008

Mr. Justin Finger

MONTGOMERY WATSON HARZA

175 West Jackson Boulevard,

Suite 1900

Chicago, IL 60604

Project ID: Blackwell P.O. # 4050581.098101

First Environmental File ID: 8-5338

Date Received: November 19, 2008

Dear Mr. Justin Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002045: effective 05/14/08 through 02/28/09.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager



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Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell P.O. # 4050581.098101**

First Environmental File ID: **8-5338**

Date Received: **November 19, 2008**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

Method Comments

Lab Number **Sample ID**
8-5338-002 BW-LCS-45

Comments:

Semi-Volatile Compounds

The reporting limits are elevated due to matrix interference.



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Analytical Report

Client: MONTGOMERY WATSON HARZA

Date Collected: 11/19/08

Project ID: Blackwell P.O. # 4050581.098101

Time Collected: 11:45

Sample ID: BW-LCS-45

Date Received: 11/19/08

Sample No: 8-5338-002

Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Date Analyzed	Method	Flag
Phenols	0.230	0.010	mg/L	11/26/08	420.1	
Total Suspended Solids	99	1	mg/L	11/20/08	2540D	
Total Dissolved Solids	3,150	10	mg/L	11/20/08	2540C	
pH @ 25°C	7.10		Units	11/19/08 15:00	4500H+,B	
COD	1,180	10	mg/L	11/21/08	5220D	
BOD, 5 Day	708	1	mg/L	11/21/08 15:30	5210B	
Oil & Grease	3	1	mg/L	11/20/08	1664A	
Ammonia (as N)	117	0.10	mg/L	11/23/08	350.1R2.0	
Cyanide, Total	< 0.005	0.005	mg/L	11/25/08	4500CN,C,E	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 4050581.098101
Sample ID: Trip Blank
Sample No: 8-5338-001

Date Collected:
Time Collected:
Date Received: 11/19/08
Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds		Method: 5030B/8260B		
Analysis Date: 11/21/08				
Acetone	< 100	100	ug/L	
Benzene	< 5.0	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	< 10.0	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	< 5.0	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 4050581.098101
Sample ID: BW-LCS-45
Sample No: 8-5338-002

Date Collected: 11/19/08
Time Collected: 11:45
Date Received: 11/19/08
Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds		Method: 5030B/8260B		
Analysis Date: 11/21/08				
Acetone	590	100	ug/L	
Benzene	8.5	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	936	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	21.2	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	6.8	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	29.6	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	9.8	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	21.1	5.0	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 4050581.098101
Sample ID: BW-LCS-45
Sample No: 8-5338-002

Date Collected: 11/19/08
Time Collected: 11:45
Date Received: 11/19/08
Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Preparation Method 3510C		
Analysis Date: 12/03/08		Preparation Date: 11/24/08		
Method: 8270C				
Acenaphthene	< 100	10	ug/L	
Acenaphthylene	< 100	10	ug/L	
Anthracene	< 100	10	ug/L	
Benzidine	< 100	10	ug/L	
Benzo(a)anthracene	< 100	10	ug/L	
Benzo(a)pyrene	< 100	10	ug/L	
Benzo(b)fluoranthene	< 100	10	ug/L	
Benzo(ghi)perylene	< 100	10	ug/L	
Benzo(k)fluoranthene	< 100	10	ug/L	
Benzoic acid	266	50	ug/L	
Benzyl alcohol	< 200	20	ug/L	
bis(2-Chloroethoxy)methane	< 100	10	ug/L	
bis(2-Chloroethyl)ether	< 100	10	ug/L	
bis(2-Chloroisopropyl)ether	< 100	10	ug/L	
bis(2-Ethylhexyl)phthalate	< 50	5	ug/L	
4-Bromophenyl phenyl ether	< 100	10	ug/L	
Butyl benzyl phthalate	< 100	10	ug/L	
Carbazole	< 100	10	ug/L	
4-Chloroaniline	< 100	10	ug/L	
4-Chloro-3-methylphenol	< 200	20	ug/L	
2-Chloronaphthalene	< 100	10	ug/L	
2-Chlorophenol	< 100	10	ug/L	
4-Chlorophenyl phenyl ether	< 100	10	ug/L	
Chrysene	< 100	10	ug/L	
Di-n-butyl phthalate	< 100	10	ug/L	
Di-n-octylphthalate	< 100	10	ug/L	
Dibenzo(a,h)anthracene	< 100	10	ug/L	
Dibenzofuran	< 100	10	ug/L	
1,2-Dichlorobenzene	< 100	10	ug/L	
1,3-Dichlorobenzene	< 100	10	ug/L	
1,4-Dichlorobenzene	115	10	ug/L	
3,3'-Dichlorobenzidine	< 200	20	ug/L	
2,4-Dichlorophenol	< 100	10	ug/L	
Diethyl phthalate	238	10	ug/L	
2,4-Dimethylphenol	< 100	10	ug/L	
Dimethyl phthalate	< 100	10	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 4050581.098101
Sample ID: BW-LCS-45
Sample No: 8-5338-002

Date Collected: 11/19/08
Time Collected: 11:45
Date Received: 11/19/08
Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds				
Analysis Date: 12/03/08		Preparation Date: 11/24/08		
Method: 8270C		Preparation Method 3510C		
4,6-Dinitro-2-methylphenol	< 500	50	ug/L	
2,4-Dinitrophenol	< 100	10	ug/L	
2,4-Dinitrotoluene	< 100	10	ug/L	
2,6-Dinitrotoluene	< 100	10	ug/L	
Fluoranthene	< 100	10	ug/L	
Fluorene	< 100	10	ug/L	
Hexachlorobenzene	< 100	10	ug/L	
Hexachlorobutadiene	< 100	10	ug/L	
Hexachlorocyclopentadiene	< 100	10	ug/L	
Hexachloroethane	< 50	5	ug/L	
Indeno(1,2,3-cd)pyrene	< 100	10	ug/L	
Isophorone	< 100	10	ug/L	
2-Methylnaphthalene	< 100	10	ug/L	
2-Methylphenol	< 100	10	ug/L	
3 & 4-Methylphenol	386	10	ug/L	
Naphthalene	< 100	10	ug/L	
2-Nitroaniline	< 500	50	ug/L	
3-Nitroaniline	< 500	50	ug/L	
4-Nitroaniline	< 200	20	ug/L	
Nitrobenzene	< 100	10	ug/L	
2-Nitrophenol	< 100	10	ug/L	
4-Nitrophenol	< 500	50	ug/L	
n-Nitrosodimethylamine	< 100	10	ug/L	
n-Nitrosodi-n-propylamine	< 100	10	ug/L	
n-Nitrosodiphenylamine	< 100	10	ug/L	
Pentachlorophenol	< 100	10	ug/L	
Phenanthrene	< 100	10	ug/L	
Phenol	< 100	10	ug/L	
Pyrene	< 100	10	ug/L	
1,2,4-Trichlorobenzene	< 100	10	ug/L	
2,4,5-Trichlorophenol	< 100	10	ug/L	
2,4,6-Trichlorophenol	< 100	10	ug/L	
Pesticides				
Analysis Date: 11/21/08		Preparation Date: 11/21/08		
Method: 8081A		Preparation Method 3510C		
Aldrin	< 0.05	0.05	ug/L	
alpha-BHC	< 0.05	0.05	ug/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 4050581.098101
Sample ID: BW-LCS-45
Sample No: 8-5338-002

Date Collected: 11/19/08
Time Collected: 11:45
Date Received: 11/19/08
Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Flags
Pesticides				
Method: 8081A		Preparation Method 3510C		
Analysis Date: 11/21/08		Preparation Date: 11/21/08		
beta-BHC	< 0.05	0.05	ug/L	
delta-BHC	< 0.05	0.05	ug/L	
gamma-BHC (Lindane)	< 0.05	0.05	ug/L	
alpha-Chlordane	< 0.50	0.50	ug/L	
gamma-Chlordane	< 0.50	0.50	ug/L	
4,4'-DDD	< 0.10	0.10	ug/L	
4,4'-DDE	< 0.10	0.10	ug/L	
4,4'-DDT	< 0.10	0.10	ug/L	
Dieldrin	< 0.10	0.10	ug/L	
Endosulfan I	< 0.05	0.05	ug/L	
Endosulfan II	< 0.10	0.10	ug/L	
Endosulfan sulfate	< 0.10	0.10	ug/L	
Endrin	< 0.10	0.10	ug/L	
Endrin aldehyde	< 0.10	0.10	ug/L	
Endrin ketone	< 0.10	0.10	ug/L	
Heptachlor	< 0.05	0.05	ug/L	
Heptachlor epoxide	< 0.05	0.05	ug/L	
Methoxychlor	< 0.50	0.50	ug/L	
Toxaphene	< 1.0	1.0	ug/L	
Total Metals				
Method: 7470A				
Analysis Date: 11/24/08				
Mercury	< 0.0005	0.0005	mg/L	
Total Metals				
Method: 6020A		Preparation Method 3010A		
Analysis Date: 11/26/08		Preparation Date: 11/20/08		
Arsenic	< 0.002	0.002	mg/L	
Barium	0.545	0.001	mg/L	
Cadmium	< 0.001	0.001	mg/L	
Chromium	0.004	0.001	mg/L	
Lead	< 0.002	0.002	mg/L	
Selenium	< 0.002	0.002	mg/L	
Silver	< 0.001	0.001	mg/L	
Boron	1.45	0.01	mg/L	
Copper	< 0.001	0.001	mg/L	
Iron	71.1	0.01	mg/L	
Manganese	1.04	0.001	mg/L	



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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 4050581.098101
Sample ID: BW-LCS-45
Sample No: 8-5338-002

Date Collected: 11/19/08
Time Collected: 11:45
Date Received: 11/19/08
Date Reported: 12/03/08

Analyte	Result	R.L.	Units	Flags
Total Metals	Method: 6020A	Preparation Method 3010A		
Analysis Date: 11/26/08		Preparation Date: 11/20/08		
Nickel	0.019	0.001	mg/L	
Zinc	0.186	0.005	mg/L	



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Page 1 of 1 pgs

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24 Hr. Pager (708) 569-7507

E-mail: info@firstenv.com

IEPA Certification# 100292

Company Name: MWH

Street Address: 175 W. JACKSON BLVD, SUITE 1900

City: CHICAGO

State: IL

Zip: 60604

Phone: (312) 831-3000

Fax: (312) 831-3021

Send Report To: JUSTIN FINGER

Sampled By: JUSTIN FINGER / DENISE AMBRASTER

Project I.D.: <u>BLACKWELL</u>		Analyses											Comments	Lab I.D.
P.O. #: <u>4050581-098101</u>		VOCs ARSENIC, BARIUM, BORON, CADMIUM, CHROMIUM (TOTAL), COPPER, CHLORIDE, IRON (TOTAL), MANGANESE, MERCURY, NICKEL, CH. PHOSPHORUS, SILVER, ZINC, AMMONIUM (AS N), TOTAL DISSOLVED SOLIDS (TDS), TOTAL SUSPENDED SOLIDS (TSS), BOD, COD, PESTICIDES												
Date/Time Taken	Sample Description	Matrix												
	TRIP BLANK	W	X											8-5338-001
11/19/08 1145	BW-LCS-45	W	X	X	X	X	X	X	X	X	X	X		-002

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes ☒ No ☐ °C

Received within 6 hrs. of collection: ☐

Ice Present: Yes ☒ No ☐

Sample Refrigerated: Yes ☐ No ☐ °C

Refrigerator Temperature: ☐ °C

5035 Vials Frozen: Yes ☐ No ☐

Freezer Temperature: ☐ °C

Containers Received Preserved: ☒

Preserved in Lab: ☐

Notes and Special Instructions: _____

Relinquished By: [Signature]

Date/Time 11/19/08 1215

Received By: [Signature]

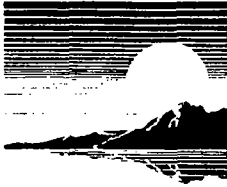
Date/Time 11/19/08 1215

Relinquished By: _____

Date/Time _____

Received By: _____

Date/Time _____



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January 28, 2009

Mr. Justin Finger
MONTGOMERY WATSON HARZA
175 West Jackson Boulevard,
Suite 1900
Chicago, IL 60604

Project ID: Blackwell P.O. # 4050581.098101
First Environmental File 9-0196
Date Received: January 21, 2009

Dear Mr. Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002045: effective 05/14/08 through 02/28/09.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager



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IL ELAP / NELAC Accreditation # 100292

Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell P.O. # 4050581.098101**

First Environmental File ID: **9-0196**

Date Received: **January 21, 2009**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.



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Analytical Report

Client: MONTGOMERY WATSON HARZA

Date Collected: 01/21/09

Project ID: Blackwell P.O. # 4050581.098101

Time Collected: 12:00

Sample ID: BW-LCS-46

Date Received: 01/21/09

Sample No: 9-0196-001

Date Reported: 01/28/09

Analyte	Result	R.L.	Units	Date Analyzed	Method	Flag
Phenols	2.210	0.010	mg/L	01/26/09	420.1	
Total Suspended Solids	158	1	mg/L	01/21/09	2540D	
Total Dissolved Solids	4,950	10	mg/L	01/21/09	2540C	
pH @ 25°C	7.10		Units	01/21/09 15:00	4500H+,B	
COD	2,320	10	mg/L	01/22/09	5220D	
BOD, 5 Day	1,960	1	mg/L	01/21/09 15:30	5210B	
Oil & Grease	9	1	mg/L	01/23/09	1664A	P
Ammonia (as N)	211	0.10	mg/L	01/27/09	350.1R2.0	
Cyanide, Total	< 0.005	0.005	mg/L	01/23/09	4500CN,C,E	



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Date Collected: 01/21/09
Time Collected: 12:00
Date Received: 01/21/09
Date Reported: 01/28/09

Analyte	Result	R.L.	Units	Flags
Total Metals Analysis Date: 01/23/09	Method: 7470A			
Mercury	< 0.0005	0.0005	mg/L	
Total Metals Analysis Date: 01/23/09	Method: 6010B	Preparation Method 3010A Preparation Date: 01/22/09		
Arsenic	< 0.002	0.002	mg/L	
Barium	0.357	0.001	mg/L	
Cadmium	0.001	0.001	mg/L	
Chromium	0.008	0.001	mg/L	
Lead	0.004	0.002	mg/L	
Selenium	< 0.002	0.002	mg/L	
Silver	< 0.001	0.001	mg/L	
Boron	2.12	0.01	mg/L	
Copper	< 0.001	0.001	mg/L	
Iron	93.6	0.01	mg/L	
Manganese	1.52	0.001	mg/L	
Nickel	0.038	0.001	mg/L	
Zinc	0.662	0.005	mg/L	



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24 Hr. Pager (708) 569-7507
E-mail: info@firstenv.com
IEPA Certification# 100292

Company Name: MWH

Street Address: 175 W. JACKSON BLVD SUITE 1900

City: CHICAGO

State: IL

Zip: 60604

Phone: (312) 831-3000

Fax: (312) 831-3021

Send Report To: J. FINGER

Sampled By: J. FINGER / A. BUTLER

Matrix Codes: S = Soil W = Water O = Other			Analyses										Comments	Lab I.D.
Date/Time Taken	Sample Description	Matrix	ARSENIC, BARIUM, BOD, CHROMIUM (TOTAL), COPPER, CHLORIDE, ZINC (TOTAL), LEAD, MANGANESE, MERCURY, NICKEL, PH, PHOSPHORUS, SILICON, SODIUM, ZINC, BOD, COD	OIL AND GREASE	AMMONIA (AS N)	TOTAL DISSOLVED SOLIDS (TDS)	TOTAL SUSPENDED SOLIDS (TSS)							
1/21/09 1200	BW-LCS-46	W	X	X	X	X	X	X	X	X			9-0196-001	

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes ☒ No ☐ °C

Received within 6 hrs. of collection: ☒

Ice Present: Yes ☒ No ☐

Sample Refrigerated: Yes ☐ No ☐

Refrigerator Temperature: °C

5035 Vials Frozen: Yes ☐ No ☐

Freezer Temperature: °C

Containers Received Preserved: ☒

Preserved in Lab:

Notes and Special Instructions:

Relinquished By: [Signature]

Date/Time 1/21/09 1235

Received By: [Signature]

Date/Time 1/21/09 1235

Relinquished By:

Date/Time

Received By:

Date/Time

APPENDIX C

LANDFILL GAS

Table C-1:	Landfill Gas Composition
Table C-2:	Landfill Gas Temperature
Table C-3:	Static Landfill Gas Pressure
Table C-4:	Landfill Gas Velocity
Table C-5:	Landfill Gas Flow Rate
Table C-6:	TNMOC Emission Rate

APPENDIX C

Table C-1: Landfill Gas Composition

Table C-1
Landfill Gas Composition
Blackwell Landfill NPL Site

Vent Number	May-08			July-08			September-08			November-08			January-09			March-09		
	% CH ₄	%CO ₂	%O ₂	% CH ₄	%CO ₂	%O ₂	% CH ₄	%CO ₂	%O ₂	% CH ₄	%CO ₂	%O ₂	% CH ₄	%CO ₂	%O ₂	% CH ₄	%CO ₂	%O ₂
SV-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-4	NM	NM	NM	3.1	1.0	19.5	0.2	0.2	20.7	NM	NM	NM	NM	NM	NM	NM	NM	NM
SV-5	0.0	0.0	20.8	3.2	1.7	19.5	5.0	4.1	18.5	0.1	0.2	22.6	NM	NM	NM	0.0	0.2	21.0
SV-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-8	6.7	3.6	18.6	7.9	4.1	18.5	4.7	3.3	18.8	7.9	5.6	19.4	NM	NM	NM	0.1	0.4	20.6
SV-9	69.6	34.8	0.3	52.2	29.9	3.6	48.3	27.8	3.7	54.6	33.6	3.5	NM	NM	NM	54.7	30.4	2.9
SV-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-5	4.9	2.5	18.3	26.0	14.2	12.3	41.9	25.2	5.4	59.2	32.5	2.5	3.9	2.0	0.0	5.9	3.6	18.0
DV-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-8	0.2	0.2	20.7	5.9	3.2	18.4	1.4	1.3	20.1	0.2	0.3	21.9	NM	NM	NM	0.0	0.2	20.4
DV-9	NM	NM	NM	2.6	1.4	19.3	6.8	5.8	16.3	0.0	0.3	22.4	NM	NM	NM	NM	NM	NM
DV-10	0.0	0.0	20.8	2.9	1.4	19.4	0.1	0.1	20.7	NM	NM	NM	7.5	4.9	0.0	6.5	3.7	19.1
DV-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-15	22.9	12.6	13.6	22.1	12.0	13.6	28.3	17.4	10.4	56.6	32.2	3.0	NM	NM	NM	NM	NM	NM
DV-16	70.0	33.7	0.4	69.0	31.0	0.0	65.2	34.7	0.0	62.8	37.1	0.0	NM	NM	NM	56.6	32.9	1.4
DV-17	1.2	0.5	19.7	NM	NM	NM	NM	NM	NM	1.1	1.1	22.6	8.7	4.8	0.0	1.1	0.9	20.2
DV-18	68.1	35.9	0.5	67.4	32.5	0.0	58.9	33.7	1.0	62.7	37.2	0.1	NM	NM	NM	63.9	33.1	0.2
EW-1	66.5	36.7	0.5	65.2	34.8	0.0	61.5	37.5	0.0	59.0	40.3	0.3	NM	NM	NM	61.9	54.4	0.2
EW-1A	0.0	0.1	20.4	56.5	28.0	0.0	47.0	25.8	0.0	3.5	2.9	20.7	60.7	27.9	0.0	NM	NM	NM
EW-2	54.8	29.9	2.5	62.0	37.8	0.0	61.8	37.1	0.2	57.9	35.2	0.2	58.7	39.9	12.3	64.9	33.0	0.5
EW-3	66.7	33.1	0.5	66.4	33.6	0.0	64.6	34.8	0.0	63.3	36.3	0.0	68.8	40.6	12.3	65.7	31.8	0.1
EW-4	72.2	30.9	0.2	70.9	29.0	0.0	67.5	29.3	0.0	67.8	31.8	0.2	70.4	0.0	12.3	72.8	26.2	0.0
EW-5	0.0	0.0	20.4	76.7	23.3	0.0	74.2	25.6	0.0	67.8	27.7	0.0	71.8	31.3	12.3	0.0	0.2	20.0
EW-6	70.0	34.6	0.1	69.1	30.9	0.0	66.3	34.6	0.0	62.7	36.8	0.0	69.1	39.9	12.3	66.2	32.7	0.9
EW-7	69.3	34.1	0.0	68.5	31.5	0.0	65.3	35.4	0.0	62.5	37.4	0.0	58.5	40.5	12.3	65.6	34.2	1.1
EW-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vent Stack	59.6	30.1	0.9	54.4	29.3	2.2	51.8	29.2	2.0	59.2	33.6	0.3	64.1	34.7	12.3	60.6	31.1	0.9
LS01	0.0	2.5	19.8	0.7	4.9	19.3	0.8	9.5	16.9	0.0	1.3	20.8	NM	NM	NM	0.0	2.1	18.9

NOTES:

%O₂ = Percent oxygen
%CH₄ = Percent methane
%CO₂ = Percent carbon dioxide
SV = Shallow vent
DV = Deep vent
EW = Extraction well
LS = Lift station
NA = Not analyzed as part of O&M
NM = Not measured for specific date

1. All measurements collected with a Landtec GA-90 gas analyzer.
2. Measurements not collected at DV-17 on 7-9-08 and 9-10-08 because vent could not be located due to excessive vegetation.
3. Measurements not collected at SV-4 and DV-10 on 11-19-08 due to equipment failure.
4. Several measurements not collected on 1-21-09 due to frozen vaults.
5. Several measurements not collected on 5-14-08 and 3-9-09 due to flooded vaults.

APPENDIX C

Table C-2: Landfill Gas Temperature

Table C-2
Landfill Gas Temperature
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-3	NA	NA	NA	NA	NA	NA
SV-4	NM	96.5	82.7	49.6	NM	NM
SV-5	61.6	91.1	78.7	51.2	NM	55.1
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	61.3	75.9	58.4	39.3	NM	37.5
SV-9	62.3	75.5	57.6	40.6	NM	37.4
SV-10	NA	NA	NA	NA	NA	NA
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	61.5	73.3	58.4	40.7	24.6	37.6
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	65.9	92.7	78.7	46.2	NM	52.2
DV-9	NM	91.0	83.4	53.5	NM	NM
DV-10	63.6	94.9	85.2	48.2	26.4	55.0
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	63.8	80.4	61.8	43.4	NM	NM
DV-16	59.6	72.0	59.3	40.9	NM	38.6
DV-17	62.0	NM	NM	39.0	20.8	37.7
DV-18	61.2	84.5	77.6	45.9	NM	44.4

Table C-2
Landfill Gas Temperature
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
EW-1	59.6	84.7	74.4	54.5	NM	49.5
EW-1A	60.5	89.8	66.8	53.1	47.4	NM
EW-2	65.5	93.2	76.0	50.1	38.5	50.2
EW-3	60.8	82.8	79.0	47.8	37.0	45.8
EW-4	61.5	73.2	63.6	52.5	43.0	40.8
EW-5	59.2	81.7	67.6	48.1	38.1	42.3
EW-6	61.6	72.7	64.1	57.5	55.2	52.1
EW-7	56.4	67.1	63.0	54.6	47.2	51.0
EW-8	NA	NA	NA	NA	NA	NA
Vent Stack	59.6	75.6	59.4	44.9	26.0	39.2
LS01	63.7	75.4	61.8	40.9	NM	37.8

Notes:

SV = Shallow vent

DV = Deep vent

EW = Extraction well

LS = Lift station

NA = Not analyzed as part of O&M

NM = Not measured for specific date

1. Temperature in units of degrees Fahrenheit.

2. All measurements taken with a TSI VELOCICALC Model 8384 velocity/temperature meter.

3. Temperature measurements not taken at DV-17 on 7-9-08 and 9-10-08 because vent could not be located.

4. Several temperature measurements not taken on 1-21-09 due to frozen vaults.

5. Several temperature measurements not taken on 5-14-08 and 3-9-09 due to flooded vaults.

APPENDIX C

Table C-3: Static Landfill Gas Pressure

Table C-3
Static Landfill Gas Pressure
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-3	NA	NA	NA	NA	NA	NA
SV-4	NM	0.00	0.01	0.00	NM	NM
SV-5	0.00	0.00	0.00	0.00	NM	0.00
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	0.005	0.00	0.00	0.00	NM	0.00
SV-9	2.30	2.60	1.40	0.00	NM	0.00
SV-10	NA	NA	NA	NA	NA	NA
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	0.01	0.00	0.04	0.00	NM	0.00
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	0.00	0.00	0.00	0.00	NM	0.00
DV-9	NM	0.00	0.00	0.00	NM	NM
DV-10	0.00	0.00	0.00	0.00	NM	0.00
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	0.40	0.00	0.03	0.00	NM	NM
DV-16	4.00	2.20	1.60	0.01	NM	0.00
DV-17	0.00	NM	NM	0.00	NM	0.00
DV-18	2.00	3.20	2.40	0.00	NM	0.00

Table C-3
Static Landfill Gas Pressure
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
SV-1	NA	NA	NA	NA	NA	NA
EW-1	0.15	0.24	0.28	0.00	NM	0.00
EW-1A	0.00	0.02	0.04	0.00	NM	NM
EW-2	0.01	0.04	0.12	0.00	NM	0.00
EW-3	0.00	0.02	0.06	0.00	NM	0.00
EW-4	0.40	0.00	0.10	0.00	NM	0.00
EW-5	0.00	0.00	0.04	0.00	NM	0.00
EW-6	0.72	0.78	0.90	0.00	NM	0.00
EW-7	1.80	2.30	2.20	0.01	NM	0.00
EW-8	NA	NA	NA	NA	NA	NA
Vent Stack	NA	NA	NA	NA	NA	NA
LS01	0.00	0.000	0.000	0.00	NM	0.00
Barometric (in. Hg)	29.84	29.94	30.23	30.05	29.99	30.15

Notes:

SV = Shallow vent

DV = Deep vent

EW = Extraction well

LS = Lift station

NA = Not analyzed as part of O&M

NM = Not measured for specific date

in. = inches

Hg = Mercury

1. Pressure in units of inches of water.

2. All measurements collected with an Alnor 6000AP velometer.

3. Pressure measurements are not conducted at the main vent stack as it is open to the atmosphere.

4. Pressure measurements not collected at DV-17 on 7-9-08 and 9-10-08 because vent could not be located.

5. Pressure measurements not collected on 1-21-09 because rental company did not send proper instrument.

6. Pressure measurements not collected at several locations on 5-14-08 and 3-9-09 due to flooded vaults.

APPENDIX C

Table C-4: Landfill Gas Velocity

Table C-4
Landfill Gas Velocity
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-3	NA	NA	NA	NA	NA	NA
SV-4	NM	3	1	4	NM	NM
SV-5	0	1	6	1	NM	1
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	3	4	2	6	NM	2
SV-9	30	30	27	20	NM	22
SV-10	NA	NA	NA	NA	NA	NA
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	0	25	85	110	9	19
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	1	3	2	0	NM	0
DV-9	NM	2	1	2	NM	NM
DV-10	2	3	3	8	145	15
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	29	10	32	53	NM	NM
DV-16	117	82	47	115	NM	241
DV-17	1	NM	NM	1	0	1
DV-18	29	49	29	42	NM	30

Table C-4
Landfill Gas Velocity
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
EW-1	NA	NA	NA	NA	NA	NA
EW-1A	NA	NA	NA	NA	NA	NA
EW-2	NA	NA	NA	NA	NA	NA
EW-3	NA	NA	NA	NA	NA	NA
EW-4	NA	NA	NA	NA	NA	NA
EW-5	NA	NA	NA	NA	NA	NA
EW-6	NA	NA	NA	NA	NA	NA
EW-7	NA	NA	NA	NA	NA	NA
EW-8	NA	NA	NA	NA	NA	NA
Vent Stack	220	290	305	500	525	120
LS01	NA	NA	NA	NA	NA	NA

Notes:

SV = Shallow vent

DV = Deep vent

EW = Extraction well

LS = Lift station

NA = Not analyzed as part of O&M

NM = Not measured for specific date

1. Velocity in units of standard feet per minute (fpm).

2. All measurements collected with a TSI VELOCICALC Model 8350 velocity/temperature meter.

3. Velocity measurements not collected at DV-17 on 7-9-08 and 9-10-08 because vent could not be located due to excessive vegetation.

4. Several velocity measurements not collected on 1-21-09 due to frozen vaults.

5. Several velocity measurements not collected on 5-14-08 and 3-9-09 due to flooded vaults.

APPENDIX C

Table C-5: Landfill Gas Flow Rate

Table C-5
Landfill Gas Flow Rate
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-3	NA	NA	NA	NA	NA	NA
SV-4	NM	0.070	0.023	0.093	NM	NM
SV-5	0.000	0.023	0.140	0.023	NM	0.023
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	0.070	0.093	0.047	0.140	NM	0.047
SV-9	0.699	0.699	0.629	0.466	NM	0.512
SV-10	NA	NA	NA	NA	NA	NA
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	0.000	0.582	1.980	2.562	0.210	0.443
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	0.088	0.265	0.177	0.000	NM	0.000
DV-9	NM	0.177	0.088	0.177	NM	NM
DV-10	0.177	0.265	0.265	0.707	12.812	1.325
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	2.562	0.884	2.828	4.683	NM	NM
DV-16	10.338	7.246	4.153	10.161	NM	21.295
DV-17	0.088	NM	NM	0.088	0.000	0.088
DV-18	2.562	4.330	2.562	3.711	NM	2.651

Table C-5
Landfill Gas Flow Rate
Blackwell Landfill NPL Site

Vent Number	May-08	July-08	September-08	November-08	January-09	March-09
EW-1	NA	NA	NA	NA	NA	NA
EW-1A	NA	NA	NA	NA	NA	NA
EW-2	NA	NA	NA	NA	NA	NA
EW-3	NA	NA	NA	NA	NA	NA
EW-4	NA	NA	NA	NA	NA	NA
EW-5	NA	NA	NA	NA	NA	NA
EW-6	NA	NA	NA	NA	NA	NA
EW-7	NA	NA	NA	NA	NA	NA
EW-8	NA	NA	NA	NA	NA	NA
Vent Stack Flowrate	44.04	58.06	61.06	100.10	105.10	24.02

Notes:

SV = Shallow vent

DV = Deep vent

EW = Extraction well

LS = Lift station

NA = Not analyzed as part of O&M

NM = Not measured for specific date

1. Flowrate in units of cubic feet per minute (CFM).

2. All measurements collected with a TSI VELOCICALC Model 8384 velocity/temperature meter.

3. Velocity measurements not collected at DV-17 on 7-9-08 and 9-10-08 because vent could not be located due to excessive vegetation.

4. Several velocity measurements not collected on 1-21-09 due to frozen vaults.

5. Several velocity measurements not collected on 5-14-08 and 3-9-09 due to flooded vaults.

APPENDIX C

Table C-6: TNMOC Emission Rate

Table C-6
TNMOC Emission Rate
Blackwell Landfill NPL Site

Date	I.D. (ft)	Vent Readings			Peak TNMOC Concentration (ppm-carbon)	Peak TNMOC Concentration (ppm-hexane)	TNMOC Emission Rate	
		Velocity (fpm)	Flowrate (ft ³ /min)	Flowrate (m ³ /min)			(Mg/yr)	(lb/hr)
May-08	0.505	220	44.04	1.25	793.9	132.32	0.33	0.0837
Jul-08	0.505	290	58.06	1.64	793.9	132.32	0.44	0.1103
Sep-08	0.505	305	61.06	1.73	793.9	132.32	0.46	0.1160
Nov-08	0.505	500	100.10	2.83	793.9	132.32	0.76	0.1902
Jan-09	0.505	525	105.10	2.98	793.9	132.32	0.79	0.1997
Mar-09	0.505	120	24.02	0.68	793.9	132.32	0.18	0.0456

Notes:

I.D. = Inside diameter

ft = Feet

fpm = Feet per minute

ft³/min = Cubic feet per minute

m³/min = Cubic meters per minute

ppm = Parts per million

TNMOC = Total non-methane organic compounds

Mg/yr = Milligrams per year

lb/hr = pound per hour

1. Flowrate in units of cubic feet per minute (CFM).

2. Measurements collected with a Landtec GA90 and TSI VELOCICALC Model 8384 velocity/temperature meter.

APPENDIX D
LANDFILL GAS ANALYTICAL DATA



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0805344B

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.088101 BLACKWELL
DATE RECEIVED:	05/15/2008	CONTACT:	Brandon Dunmore
DATE COMPLETED:	05/29/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-46A	Modified ASTM D-1945	0.5 "Hg	5 psi
02A	Lab Blank	Modified ASTM D-1945	NA	NA
02B	Lab Blank	Modified ASTM D-1945	NA	NA
03A	LCS	Modified ASTM D-1945	NA	NA
03AA	LCSD	Modified ASTM D-1945	NA	NA
03B	LCS	Modified ASTM D-1945	NA	NA
03BB	LCSD	Modified ASTM D-1945	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 05/29/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1945
MWH Americas, Inc.
Workorder# 0805344B

The laboratory performed analysis via modified ASTM Method D-1945 for Methane and fixed gases in natural gas using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1945	ATL Modifications
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 85-115%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum 3-point linear calibration is performed. The acceptance criterion is %RSD <= 15%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+ Hydrocarbons).
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Six qualifiers may have been used on the data analysis sheets and indicate as follows:

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: BW-LFGSTACK-46A

Lab ID#: 0805344B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.14	20
Nitrogen	0.14	75
Methane	0.00014	3.1
Carbon Dioxide	0.014	1.6
Ethane	0.0014	0.00013 J
Ethene	0.0014	0.000074 J
Propane	0.0014	0.000055 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-46A

Lab ID#: 0805344B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052010	Date of Collection: 5/14/08
Dil. Factor:	1.36	Date of Analysis: 5/20/08 04:09 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.14	20
Nitrogen	0.14	75
Carbon Monoxide	0.014	Not Detected
Methane	0.00014	3.1
Carbon Dioxide	0.014	1.6
Ethane	0.0014	0.00013 J
Ethene	0.0014	0.000074 J
Acetylene	0.0014	Not Detected
Propane	0.0014	0.000055 J
Isobutane	0.0014	Not Detected
Butane	0.0014	Not Detected
Neopentane	0.0014	Not Detected
Isopentane	0.0014	Not Detected
Pentane	0.0014	Not Detected
C6+	0.014	Not Detected
Hydrogen	0.014	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0805344B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052009a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/20/08 03:37 AM
Compound	Rpt. Limit (%)	Amount (%)	
Oxygen	0.10	0.015 J	
Nitrogen	0.10	0.067 J	
Carbon Monoxide	0.010	Not Detected	
Methane	0.00010	Not Detected	
Carbon Dioxide	0.010	Not Detected	
Ethane	0.0010	Not Detected	
Ethene	0.0010	Not Detected	
Acetylene	0.0010	Not Detected	
Propane	0.0010	Not Detected	
Isobutane	0.0010	Not Detected	
Butane	0.0010	Not Detected	
Neopentane	0.0010	Not Detected	
Isopentane	0.0010	Not Detected	
Pentane	0.0010	Not Detected	
C6+	0.010	Not Detected	

J = Estimated value.

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0805344B-02B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052005ab	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/20/08 01:41 AM

Compound	Rpt. Limit (%)	Amount (%)
Hydrogen	0.010	Not Detected

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0805344B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/20/08 12:51 AM

Compound	%Recovery
Oxygen	101
Nitrogen	100
Carbon Monoxide	101
Methane	102
Carbon Dioxide	99
Ethane	101
Ethene	102
Acetylene	102
Propane	102
Isobutane	99
Butane	100
Neopentane	100
Isopentane	100
Pentane	100
C6+	101

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0805344B-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052032	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/20/08 05:48 PM

Compound	%Recovery
Oxygen	101
Nitrogen	100
Carbon Monoxide	100
Methane	101
Carbon Dioxide	100
Ethane	101
Ethene	101
Acetylene	102
Propane	101
Isobutane	99
Butane	99
Neopentane	100
Isopentane	100
Pentane	100
C6+	102

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0805344B-03B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052004b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/20/08 01:16 AM

Compound	%Recovery
Hydrogen	94

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0805344B-03BB

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9052033b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/20/08 06:13 PM

Compound	%Recovery
Hydrogen	94

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0805344A

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.088101 BLACKWELL
DATE RECEIVED:	05/15/2008	CONTACT:	Brandon Dunmore
DATE COMPLETED:	05/29/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-46A	Modified TO-14A	0.5 "Hg	5 psi
02A	Lab Blank	Modified TO-14A	NA	NA
03A	CCV	Modified TO-14A	NA	NA
04A	LCS	Modified TO-14A	NA	NA
04AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 05/29/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE

**Modified TO-14A
MWH Americas, Inc.
Workorder# 0805344A**

One 6 Liter Summa Canister sample was received on May 15, 2008. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-14A	ATL Modifications
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD<=30%, two compounds allowed up to 40%
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Moisture control	Nafion Dryer	Multisorbent trap
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: BW-LFGSTACK-46A

Lab ID#: 0805344A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.68	98	3.4	490
Freon 114	0.68	21	4.8	140
Vinyl Chloride	0.68	220	1.7	560
Chloroethane	0.68	27	1.8	72
Freon 11	0.68	1.3	3.8	7.4
Freon 113	0.68	0.64 J	5.2	4.9 J
1,1-Dichloroethene	0.68	0.49 J	2.7	2.0 J
Acetone	2.7	16	6.5	39
Methylene Chloride	0.68	1.6	2.4	5.4
trans-1,2-Dichloroethene	0.68	1.4	2.7	5.8
Hexane	0.68	24	2.4	86
1,1-Dichloroethane	0.68	0.66 J	2.8	2.7 J
2-Butanone (Methyl Ethyl Ketone)	0.68	2.3	2.0	6.8
cis-1,2-Dichloroethene	0.68	2.1	2.7	8.5
Cyclohexane	0.68	9.8	2.3	34
2,2,4-Trimethylpentane	0.68	1.4 J	3.2	6.8 J
Benzene	0.68	1.2	2.2	3.7
Heptane	0.68	16	2.8	66
Toluene	0.68	0.73	2.6	2.7
m,p-Xylene	0.68	0.56 J	3.0	2.4 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-46A

Lab ID#: 0805344A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name: 5052709		Date of Collection: 5/14/08		
Dil. Factor: 1.36		Date of Analysis: 5/27/08 02:40 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.68	98	3.4	490
Freon 114	0.68	21	4.8	140
Chloromethane	2.7	Not Detected	5.6	Not Detected
Vinyl Chloride	0.68	220	1.7	560
1,3-Butadiene	0.68	Not Detected	1.5	Not Detected
Bromomethane	0.68	Not Detected	2.6	Not Detected
Chloroethane	0.68	27	1.8	72
Freon 11	0.68	1.3	3.8	7.4
Ethanol	2.7	Not Detected	5.1	Not Detected
Freon 113	0.68	0.64 J	5.2	4.9 J
1,1-Dichloroethene	0.68	0.49 J	2.7	2.0 J
Acetone	2.7	16	6.5	39
2-Propanol	2.7	Not Detected	6.7	Not Detected
Carbon Disulfide	0.68	Not Detected	2.1	Not Detected
3-Chloropropene	2.7	Not Detected	8.5	Not Detected
Methylene Chloride	0.68	1.6	2.4	5.4
Methyl tert-butyl ether	0.68	Not Detected	2.4	Not Detected
trans-1,2-Dichloroethene	0.68	1.4	2.7	5.8
Hexane	0.68	24	2.4	86
1,1-Dichloroethane	0.68	0.66 J	2.8	2.7 J
2-Butanone (Methyl Ethyl Ketone)	0.68	2.3	2.0	6.8
cis-1,2-Dichloroethene	0.68	2.1	2.7	8.5
Tetrahydrofuran	0.68	Not Detected U J	2.0	Not Detected U J
Chloroform	0.68	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Cyclohexane	0.68	9.8	2.3	34
Carbon Tetrachloride	0.68	Not Detected	4.3	Not Detected
2,2,4-Trimethylpentane	0.68	1.4 J	3.2	6.8 J
Benzene	0.68	1.2	2.2	3.7
1,2-Dichloroethane	0.68	Not Detected	2.8	Not Detected
Heptane	0.68	16	2.8	66
Trichloroethene	0.68	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.68	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.8	Not Detected
Bromodichloromethane	0.68	Not Detected	4.6	Not Detected
cis-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.68	Not Detected	2.8	Not Detected
Toluene	0.68	0.73	2.6	2.7
trans-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-46A

Lab ID#: 0805344A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052709	Date of Collection:	5/14/08
Dil. Factor:	1.36	Date of Analysis:	5/27/08 02:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Tetrachloroethene	0.68	Not Detected	4.6	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected
Dibromochloromethane	0.68	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.68	Not Detected	5.2	Not Detected
Chlorobenzene	0.68	Not Detected	3.1	Not Detected
Ethyl Benzene	0.68	Not Detected	3.0	Not Detected
m,p-Xylene	0.68	0.56 J	3.0	2.4 J
o-Xylene	0.68	Not Detected	3.0	Not Detected
Styrene	0.68	Not Detected	2.9	Not Detected
Bromoform	0.68	Not Detected	7.0	Not Detected
Cumene	0.68	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.68	Not Detected	4.7	Not Detected
Propylbenzene	0.68	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.68	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,4-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
alpha-Chlorotoluene	0.68	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected

J = Estimated value.

UJ = Non-detected compound associated with low bias in the CCV

J = Estimated value due to bias in the CCV.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	107	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0805344A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name: 5052706a		Date of Collection: NA		
Dil. Factor: 1.00		Date of Analysis: 5/27/08 11:55 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	0.40 J	1.5	1.2 J
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected U J	2.3	Not Detected U J
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0805344A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052706a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 11:55 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

J = Estimated value.

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	80	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	106	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0805344A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 07:51 AM

Compound	%Recovery
Freon 12	74
Freon 114	112
Chloromethane	79
Vinyl Chloride	102
1,3-Butadiene	91
Bromomethane	122
Chloroethane	102
Freon 11	92
Ethanol	89
Freon 113	112
1,1-Dichloroethene	84
Acetone	90
2-Propanol	76
Carbon Disulfide	97
3-Chloropropene	95
Methylene Chloride	77
Methyl tert-butyl ether	115
trans-1,2-Dichloroethene	96
Hexane	81
1,1-Dichloroethane	78
2-Butanone (Methyl Ethyl Ketone)	84
cis-1,2-Dichloroethene	75
Tetrahydrofuran	68 Q
Chloroform	70
1,1,1-Trichloroethane	72
Cyclohexane	78
Carbon Tetrachloride	78
2,2,4-Trimethylpentane	69 Q
Benzene	82
1,2-Dichloroethane	91
Heptane	94
Trichloroethene	86
1,2-Dichloropropane	81
1,4-Dioxane	81
Bromodichloromethane	88
cis-1,3-Dichloropropene	83
4-Methyl-2-pentanone	84
Toluene	83
trans-1,3-Dichloropropene	95



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0805344A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 07:51 AM

Compound	%Recovery
1,1,2-Trichloroethane	94
Tetrachloroethene	110
2-Hexanone	84
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	92
Chlorobenzene	95
Ethyl Benzene	95
m,p-Xylene	95
o-Xylene	92
Styrene	95
Bromoform	109
Cumene	92
1,1,2,2-Tetrachloroethane	84
Propylbenzene	91
4-Ethyltoluene	93
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	109
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	111
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	106
Hexachlorobutadiene	108

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	78	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	110	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0805344A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 08:18 AM

Compound	%Recovery
Freon 12	80
Freon 114	112
Chloromethane	81
Vinyl Chloride	98
1,3-Butadiene	86
Bromomethane	120
Chloroethane	97
Freon 11	87
Ethanol	84
Freon 113	118
1,1-Dichloroethene	90
Acetone	80
2-Propanol	77
Carbon Disulfide	94
3-Chloropropene	94
Methylene Chloride	82
Methyl tert-butyl ether	111
trans-1,2-Dichloroethene	95
Hexane	78
1,1-Dichloroethane	79
2-Butanone (Methyl Ethyl Ketone)	83
cis-1,2-Dichloroethene	77
Tetrahydrofuran	64
Chloroform	72
1,1,1-Trichloroethane	74
Cyclohexane	80
Carbon Tetrachloride	79
2,2,4-Trimethylpentane	69
Benzene	80
1,2-Dichloroethane	88
Heptane	92
Trichloroethene	82
1,2-Dichloropropane	77
1,4-Dioxane	78
Bromodichloromethane	86
cis-1,3-Dichloropropene	80
4-Methyl-2-pentanone	83
Toluene	86
trans-1,3-Dichloropropene	91



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0805344A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 08:18 AM

Compound	%Recovery
1,1,2-Trichloroethane	88
Tetrachloroethene	107
2-Hexanone	79
Dibromochloromethane	99
1,2-Dibromoethane (EDB)	85
Chlorobenzene	93
Ethyl Benzene	91
m,p-Xylene	91
o-Xylene	92
Styrene	90
Bromoform	105
Cumene	92
1,1,2,2-Tetrachloroethane	82
Propylbenzene	91
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	92
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	101
Hexachlorobutadiene	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	80	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	112	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0805344A-04AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 09:42 AM

Compound	%Recovery
Freon 12	81
Freon 114	110
Chloromethane	81
Vinyl Chloride	99
1,3-Butadiene	85
Bromomethane	123
Chloroethane	94
Freon 11	88
Ethanol	84
Freon 113	120
1,1-Dichloroethene	90
Acetone	79
2-Propanol	78
Carbon Disulfide	95
3-Chloropropene	93
Methylene Chloride	83
Methyl tert-butyl ether	114
trans-1,2-Dichloroethene	94
Hexane	80
1,1-Dichloroethane	78
2-Butanone (Methyl Ethyl Ketone)	79
cis-1,2-Dichloroethene	74
Tetrahydrofuran	64
Chloroform	70
1,1,1-Trichloroethane	71
Cyclohexane	75
Carbon Tetrachloride	77
2,2,4-Trimethylpentane	68
Benzene	77
1,2-Dichloroethane	86
Heptane	84
Trichloroethene	81
1,2-Dichloropropane	73
1,4-Dioxane	76
Bromodichloromethane	84
cis-1,3-Dichloropropene	78
4-Methyl-2-pentanone	78
Toluene	81
trans-1,3-Dichloropropene	89



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0805344A-04AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5052704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/08 09:42 AM

Compound	%Recovery
1,1,2-Trichloroethane	88
Tetrachloroethene	104
2-Hexanone	80
Dibromochloromethane	99
1,2-Dibromoethane (EDB)	84
Chlorobenzene	90
Ethyl Benzene	89
m,p-Xylene	92
o-Xylene	90
Styrene	88
Bromoform	102
Cumene	90
1,1,2,2-Tetrachloroethane	83
Propylbenzene	87
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	89
1,2,4-Trimethylbenzene	88
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	103
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	97
Hexachlorobutadiene	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	77	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	115	70-130



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Requiring signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4622

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager DAVID POWERS

Collected by: (Print and Sign) JUSTIN FINCH/AMANDA BURTON

Company MWH Email JUSTIN.FINCH@MWH.COM

Address 175 W. JACKSON BLVD. 1902 City CHICAGO State IL Zip 60604

Phone (312) 831-3000 Fax (312) 831-3021

Project Info:

P.O. # _____

Project # 4050581.088101

Project Name BLACKWELL

Turn Around Time:

☒ Normal

☐ Rush

specify _____

Lab Use Only

Pressurized by: _____

Date: _____

Pressurization Gas: _____

N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<u>01A</u>	<u>BW-LFG-STACK-46A</u>	<u>4360</u>	<u>5/14/08</u>	<u>0715-1245</u>	<u>TO14/ASTM D1450</u>	<u>-29.46</u>	<u>0.1 H₂</u>		

Relinquished by: (signature) Date/Time

[Signature] 5/14/08 1700

Received by: (signature) Date/Time

Monica Grogan ARL 5/15/08 850

Notes:

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Lab Use Only

Shipper Name

Air Bill #

Temp. (°C)

Condition

Custody Seals Intact?

Work Order #

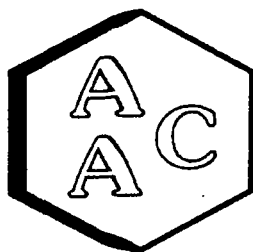
Red Ex

NA

Good

Yes No Note

0805344



Atmospheric Analysis & Consulting, Inc.

CLIENT : MWH Americas
AAC PROJECT NO. : 080265
REPORT DATE : 05/19/2008

On May 15, 2008 Atmospheric Analysis & Consulting, Inc. received one (1) Summa Canister for Total non-methane organic compounds analysis by EPA 25C. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

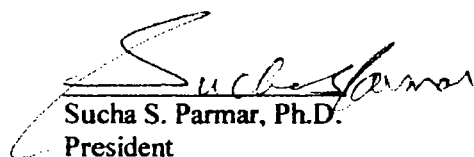
Client ID	Lab No.	Initial Pressure	Final Pressure
BW-LFG-Stack-46A	080265-32730	684.9	923.6

EPA 25C Analysis - Up to a 1 mL aliquot of samples is injected into the GC/FID/TCA for analysis in triplicate following EPA 25C as specified in the SOW.

No problems were encountered during receiving, preparation, and/ or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI- EPA 25C.

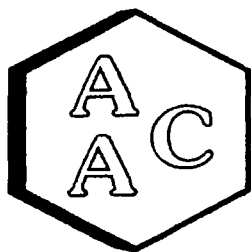
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Release of the data contained in this hardcopy data package and its electronic data deliverable submitted on diskette has been authorized by the Laboratory Director or his designee, as verified by the following signature.

If you have any questions or require further explanation of data results, please contact the undersigned.


Sucha S. Parmar, Ph.D.
President

This report consists of 4 pages.





Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

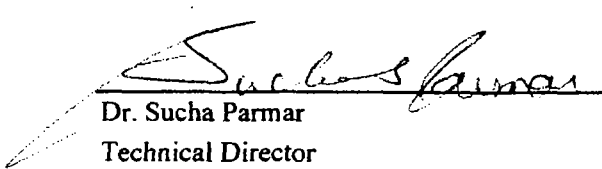
Client : MWH Americas
Project No. : 080265
Matrix : Air
Units : ppmv

Sampling Date : 05/14/2008
Receiving Date : 05/15/2008
Analysis Date : 05/15/2008
Report Date : 05/19/2008

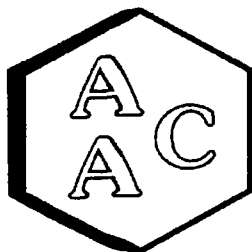
EPA Method 25C

Detection Limit:		1.0 ppmv
Client Sample ID	AAC ID	TNMOC*
BW-LFG-Stack-46A	080265-32730	60.0

*Total Non-Methane Organic Compounds as Methane


Dr. Sucha Parmar
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Analysis Date: 5/15/2008
Analyst: TT
Units: ppmv

Instrument ID: FID#9
Calibration Date: 1/18/2008

I - Opening Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	11101	5.4
CH4	11996	11813	1.5
CO2	11842	11061	6.8
Propane	33025	30902	6.6

II - Method Blank - Method 25C

AAC ID	Analyte	Sample Result
MB	NMEHC	ND

III - Laboratory Control Spike & Duplicate - Method 25C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	NMEHC	50.0	49.1	51.7	98.1	103.4	5.2

IV - Closing Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	11098	5.4
CH4	11996	12527	4.3
CO2	11842	11580	2.2
Propane	33025	31612	4.4

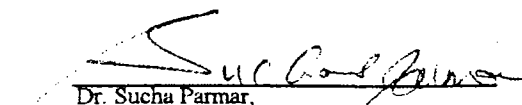
xCF - Average Calibration Factor from Initial Calibration Curve

dCF - Daily Calibration Factor

* Must be <15%

** Must be 90-110 %

*** Must be <20%


Dr. Sucha Parmar,
Technical Director





ATMOSPHERIC ANALYSIS & CONSULTING, INC.
1534 Eastman Avenue, Suite A
Ventura, California 93003
Phone (805) 650-1642 Fax (805) 650-1644
E-mail: aacLab@earthlink.net

AAC Project No.

050245

Page 1 of 1

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name MWH			Project Name BLACKWELL			Analysis Requested				Send Report:											
Project Mgr (Print Name) Justin Finger			Project Number 4050581.088101			<div style="display: flex; align-items: center;"><div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">EPA 252.902 (TOMU)</div><table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></div>														Attn: Justin Finger	
Sampler's Name (Print Name) Justin Finger / Amanda Butler			Sampler's Signature <i>[Signature]</i>			Phone #: (312) 831-3000															
AAC Sample No.	Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type/No. of containers					Fax #: (312) 831-3000											
32730	5/14/08	0715-1645	GMB	BW-LFGSTACK-46A	AIR 1	X				Send Invoice to:											
										Attn:											
										P.O. #											
										Turn Around Time											
										24-Hr _____ 48-Hr _____											
										5 day _____ Normal <input checked="" type="checkbox"/>											
										Other (Specify)											
										Special Instructions / remarks:											
Relinquished by (Signature) <i>[Signature]</i>			Print name: Justin Finger			Date/Time 5/14/08 1700		Received by (Signature) <i>[Signature]</i>		Print Name Justin Finger 5/15/08 5:11/02											
Relinquished by (Signature)			Print name:			Date/Time		Received by (Signature)		Print Name											



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0809202B

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.098101 BLACKWELL
DATE RECEIVED:	09/11/2008	CONTACT:	Brandon Dunmore
DATE COMPLETED:	09/22/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-47A	Modified ASTM D-1945	4.0 "Hg	5 psi
02A	Lab Blank	Modified ASTM D-1945	NA	NA
02B	Lab Blank	Modified ASTM D-1945	NA	NA
03A	LCS	Modified ASTM D-1945	NA	NA
03AA	LCSD	Modified ASTM D-1945	NA	NA
04A	LCS	Modified ASTM D-1945	NA	NA
04AA	LCSD	Modified ASTM D-1945	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 09/22/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

LABORATORY NARRATIVE
Modified ASTM D-1945
MWH Americas, Inc.
Workorder# 0809202B

One 6 Liter Summa Canister sample was received on September 11, 2008. The laboratory performed analysis via modified ASTM Method D-1945 for Methane and fixed gases in natural gas using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1945	ATL Modifications
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 85-115%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum 3-point linear calibration is performed. The acceptance criterion is %RSD <= 15%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+ Hydrocarbons).
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Since Nitrogen is used to pressurize samples, the Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are



AN ENVIRONMENTAL ANALYTICAL LABORATORY

below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Six qualifiers may have been used on the data analysis sheets and indicate as follows:

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: BW-LFGSTACK-47A

Lab ID#: 0809202B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	1.5
Nitrogen	0.16	12
Methane	0.00016	56
Carbon Dioxide	0.016	30
Ethane	0.0016	0.0025
Ethene	0.0016	0.0013 J
Propane	0.0016	0.0011 J
Isobutane	0.0016	0.00036 J
Butane	0.0016	0.00012 J
Pentane	0.0016	0.000096 J
C6+	0.016	0.010 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-47A

Lab ID#: 0809202B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9091845	Date of Collection: 9/10/08
Dil. Factor:	1.55	Date of Analysis: 9/19/08 07:22 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	1.5
Nitrogen	0.16	12
Carbon Monoxide	0.016	Not Detected
Methane	0.00016	56
Carbon Dioxide	0.016	30
Ethane	0.0016	0.0025
Ethene	0.0016	0.0013 J
Acetylene	0.0016	Not Detected
Propane	0.0016	0.0011 J
Isobutane	0.0016	0.00036 J
Butane	0.0016	0.00012 J
Neopentane	0.0016	Not Detected
Isopentane	0.0016	Not Detected
Pentane	0.0016	0.000096 J
C6+	0.016	0.010 J
Hydrogen	0.016	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0809202B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name: 9091822a		Date of Collection: NA
Dil. Factor: 1.00		Date of Analysis: 9/18/08 05:29 PM
Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.019 J
Nitrogen	0.10	0.086 J
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected
Acetylene	0.0010	Not Detected
Propane	0.0010	Not Detected
Isobutane	0.0010	Not Detected
Butane	0.0010	Not Detected
Neopentane	0.0010	Not Detected
Isopentane	0.0010	Not Detected
Pentane	0.0010	Not Detected
C6+	0.010	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0809202B-02B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9091821ba	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/08 05:07 PM

Compound	Rpt. Limit (%)	Amount (%)
Hydrogen	0.010	Not Detected

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0809202B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9091847	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 08:16 AM

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Monoxide	99
Methane	103
Carbon Dioxide	99
Ethane	104
Ethene	102
Acetylene	102
Propane	103
Isobutane	101
Butane	100
Neopentane	101
Isopentane	100
Pentane	101
C6+	100

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0809202B-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9091848	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 08:41 AM

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Monoxide	99
Methane	103
Carbon Dioxide	99
Ethane	104
Ethene	102
Acetylene	103
Propane	103
Isobutane	101
Butane	101
Neopentane	101
Isopentane	100
Pentane	101
C6+	101

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0809202B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9091849b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 09:04 AM

Compound	%Recovery
Hydrogen	98

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0809202B-04AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9091850b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 09:26 AM

Compound	%Recovery
Hydrogen	98

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0809202A

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.098101 BLACKWELL
DATE RECEIVED:	09/11/2008	CONTACT:	Brandon Dunmore
DATE COMPLETED:	09/22/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-47A	Modified TO-14A (5&20 ppb	4.0 "Hg	5 psi
02A	Lab Blank	Modified TO-14A (5&20 ppb	NA	NA
03A	CCV	Modified TO-14A (5&20 ppb	NA	NA
04A	LCS	Modified TO-14A (5&20 ppb	NA	NA
04AA	LCSD	Modified TO-14A (5&20 ppb	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 09/22/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

LABORATORY NARRATIVE
Modified TO-14A Soil Gas
MWH Americas, Inc.
Workorder# 0809202A

One 6 Liter Summa Canister sample was received on September 11, 2008. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-14A	ATL Modifications
Initial Calibration	+/- 30 % RSD	<= 30 % RSD with 2 compounds allowed out to < 40 %.
Daily CCV	+/- 30 % D	<= 30 % D with 2 allowed out up to 40%; flag and narrate associated sample results
BFB Tune Absolute Abundance Criteria	Within 10% of that from the previous day.	CCV Internal Standard area counts are compared to the ICAL; corrective action for > 40 %D
Blank acceptance criteria	< 0.2 ppbv	< RL
Sampling Drying System	Nafion Dryer	Multisorbent concentrator
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS

Client Sample ID: BW-LFGSTACK-47A

Lab ID#: 0809202A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	31	3500	150	17000
Freon 114	31	470	220	3300
Vinyl Chloride	31	6100	79	16000
Chloroethane	31	660	82	1700
Freon 11	31	18 J	170	100 J
Ethanol	120	1200	230	2400
Acetone	120	700	290	1600
2-Propanol	120	140	300	350
Carbon Disulfide	31	8.5 J	96	26 J
Methylene Chloride	31	120	110	410
trans-1,2-Dichloroethene	31	200	120	820
Hexane	31	1100	110	4000
1,1-Dichloroethane	31	150	120	600
2-Butanone (Methyl Ethyl Ketone)	31	1000	91	3100
cis-1,2-Dichloroethene	31	2300	120	9200
Tetrahydrofuran	31	150	91	450
1,1,1-Trichloroethane	31	30 J	170	170 J
Cyclohexane	31	710	110	2400
Benzene	31	1500	99	4700
Heptane	31	2600	130	10000
Trichloroethene	31	540	170	2900
1,2-Dichloropropane	31	150	140	690
4-Methyl-2-pentanone	31	570	130	2300
Toluene	31	23000	120	88000
Tetrachloroethene	31	480	210	3300
Chlorobenzene	31	250	140	1100
Ethyl Benzene	31	5100	130	22000
m,p-Xylene	31	10000	130	44000
o-Xylene	31	2800	130	12000
Styrene	31	230	130	990
Cumene	31	440	150	2100
Propylbenzene	31	750	150	3700
4-Ethyltoluene	31	2200	150	11000
1,3,5-Trimethylbenzene	31	1000	150	4900
1,2,4-Trimethylbenzene	31	2800	150	14000
1,4-Dichlorobenzene	31	1000	190	6300
1,2-Dichlorobenzene	31	28 J	190	170 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-47A

Lab ID#: 0809202A-01A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091917	Date of Collection:	9/10/08
Dil. Factor:	6.20	Date of Analysis:	9/19/08 04:14 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	31	3500	150	17000
Freon 114	31	470	220	3300
Chloromethane	120	Not Detected	260	Not Detected
Vinyl Chloride	31	6100	79	16000
1,3-Butadiene	31	Not Detected	68	Not Detected
Bromomethane	31	Not Detected	120	Not Detected
Chloroethane	31	660	82	1700
Freon 11	31	18 J	170	100 J
Ethanol	120	1200	230	2400
Freon 113	31	Not Detected	240	Not Detected
1,1-Dichloroethene	31	Not Detected	120	Not Detected
Acetone	120	700	290	1600
2-Propanol	120	140	300	350
Carbon Disulfide	31	8.5 J	96	26 J
3-Chloropropene	120	Not Detected	390	Not Detected
Methylene Chloride	31	120	110	410
Methyl tert-butyl ether	31	Not Detected	110	Not Detected
trans-1,2-Dichloroethene	31	200	120	820
Hexane	31	1100	110	4000
1,1-Dichloroethane	31	150	120	600
2-Butanone (Methyl Ethyl Ketone)	31	1000	91	3100
cis-1,2-Dichloroethene	31	2300	120	9200
Tetrahydrofuran	31	150	91	450
Chloroform	31	Not Detected	150	Not Detected
1,1,1-Trichloroethane	31	30 J	170	170 J
Cyclohexane	31	710	110	2400
Carbon Tetrachloride	31	Not Detected	200	Not Detected
2,2,4-Trimethylpentane	31	Not Detected	140	Not Detected
Benzene	31	1500	99	4700
1,2-Dichloroethane	31	Not Detected	120	Not Detected
Heptane	31	2600	130	10000
Trichloroethene	31	540	170	2900
1,2-Dichloropropane	31	150	140	690
1,4-Dioxane	120	Not Detected	450	Not Detected
Bromodichloromethane	31	Not Detected	210	Not Detected
cis-1,3-Dichloropropene	31	Not Detected	140	Not Detected
4-Methyl-2-pentanone	31	570	130	2300
Toluene	31	23000	120	88000
trans-1,3-Dichloropropene	31	Not Detected	140	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-47A

Lab ID#: 0809202A-01A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091917	Date of Collection: 9/10/08
Dil. Factor:	6.20	Date of Analysis: 9/19/08 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	31	Not Detected	170	Not Detected
Tetrachloroethene	31	480	210	3300
2-Hexanone	120	Not Detected	510	Not Detected
Dibromochloromethane	31	Not Detected	260	Not Detected
1,2-Dibromoethane (EDB)	31	Not Detected	240	Not Detected
Chlorobenzene	31	250	140	1100
Ethyl Benzene	31	5100	130	22000
m,p-Xylene	31	10000	130	44000
o-Xylene	31	2800	130	12000
Styrene	31	230	130	990
Bromoform	31	Not Detected	320	Not Detected
Cumene	31	440	150	2100
1,1,2,2-Tetrachloroethane	31	Not Detected	210	Not Detected
Propylbenzene	31	750	150	3700
4-Ethyltoluene	31	2200	150	11000
1,3,5-Trimethylbenzene	31	1000	150	4900
1,2,4-Trimethylbenzene	31	2800	150	14000
1,3-Dichlorobenzene	31	Not Detected	190	Not Detected
1,4-Dichlorobenzene	31	1000	190	6300
alpha-Chlorotoluene	31	Not Detected	160	Not Detected
1,2-Dichlorobenzene	31	28 J	190	170 J
1,2,4-Trichlorobenzene	120	Not Detected	920	Not Detected
Hexachlorobutadiene	120	Not Detected	1300	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0809202A-02A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091911a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 12:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	20	Not Detected	38	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	20	Not Detected	49	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	5.0	Not Detected	20	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0809202A-02A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091911a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 12:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0809202A-03A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 09:38 AM

Compound	%Recovery
Freon 12	92
Freon 114	99
Chloromethane	94
Vinyl Chloride	106
1,3-Butadiene	113
Bromomethane	118
Chloroethane	118
Freon 11	90
Ethanol	102
Freon 113	102
1,1-Dichloroethene	98
Acetone	106
2-Propanol	103
Carbon Disulfide	109
3-Chloropropene	117
Methylene Chloride	96
Methyl tert-butyl ether	87
trans-1,2-Dichloroethene	108
Hexane	110
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	116
cis-1,2-Dichloroethene	100
Tetrahydrofuran	100
Chloroform	95
1,1,1-Trichloroethane	90
Cyclohexane	110
Carbon Tetrachloride	88
2,2,4-Trimethylpentane	108
Benzene	103
1,2-Dichloroethane	85
Heptane	104
Trichloroethene	96
1,2-Dichloropropane	103
1,4-Dioxane	108
Bromodichloromethane	91
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	109
Toluene	99
trans-1,3-Dichloropropene	103



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0809202A-03A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 09:38 AM

Compound	%Recovery
1,1,2-Trichloroethane	101
Tetrachloroethene	96
2-Hexanone	112
Dibromochloromethane	94
1,2-Dibromoethane (EDB)	101
Chlorobenzene	101
Ethyl Benzene	103
m,p-Xylene	101
o-Xylene	104
Styrene	106
Bromoform	95
Cumene	100
1,1,2,2-Tetrachloroethane	101
Propylbenzene	101
4-Ethyltoluene	99
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	96
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	91
Hexachlorobutadiene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0809202A-04A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091908	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 10:50 AM

Compound	%Recovery
Freon 12	89
Freon 114	97
Chloromethane	89
Vinyl Chloride	109
1,3-Butadiene	116
Bromomethane	122
Chloroethane	114
Freon 11	88
Ethanol	101
Freon 113	101
1,1-Dichloroethene	96
Acetone	104
2-Propanol	107
Carbon Disulfide	105
3-Chloropropene	108
Methylene Chloride	94
Methyl tert-butyl ether	79
trans-1,2-Dichloroethene	100
Hexane	101
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	98
Tetrahydrofuran	94
Chloroform	94
1,1,1-Trichloroethane	92
Cyclohexane	102
Carbon Tetrachloride	88
2,2,4-Trimethylpentane	99
Benzene	101
1,2-Dichloroethane	83
Heptane	98
Trichloroethene	95
1,2-Dichloropropane	103
1,4-Dioxane	101
Bromodichloromethane	85
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	102
Toluene	99
trans-1,3-Dichloropropene	105



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0809202A-04A

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091908	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 10:50 AM

Compound	%Recovery
1,1,2-Trichloroethane	100
Tetrachloroethene	96
2-Hexanone	111
Dibromochloromethane	90
1,2-Dibromoethane (EDB)	102
Chlorobenzene	101
Ethyl Benzene	104
m,p-Xylene	104
o-Xylene	107
Styrene	109
Bromoform	94
Cumene	104
1,1,2,2-Tetrachloroethane	107
Propylbenzene	98
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	110
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	109
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	116

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0809202A-04AA

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091909	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 11:35 AM

Compound	%Recovery
Freon 12	89
Freon 114	96
Chloromethane	90
Vinyl Chloride	110
1,3-Butadiene	115
Bromomethane	123
Chloroethane	115
Freon 11	88
Ethanol	102
Freon 113	101
1,1-Dichloroethene	96
Acetone	104
2-Propanol	108
Carbon Disulfide	105
3-Chloropropene	108
Methylene Chloride	95
Methyl tert-butyl ether	84
trans-1,2-Dichloroethene	102
Hexane	102
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	99
Tetrahydrofuran	94
Chloroform	94
1,1,1-Trichloroethane	92
Cyclohexane	102
Carbon Tetrachloride	88
2,2,4-Trimethylpentane	101
Benzene	102
1,2-Dichloroethane	84
Heptane	99
Trichloroethene	95
1,2-Dichloropropane	103
1,4-Dioxane	102
Bromodichloromethane	85
cis-1,3-Dichloropropene	107
4-Methyl-2-pentanone	105
Toluene	100
trans-1,3-Dichloropropene	106



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0809202A-04AA

MODIFIED EPA METHOD TO-14A GC/MS

File Name:	w091909	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/08 11:35 AM

Compound	%Recovery
1,1,2-Trichloroethane	100
Tetrachloroethene	95
2-Hexanone	110
Dibromochloromethane	90
1,2-Dibromoethane (EDB)	102
Chlorobenzene	100
Ethyl Benzene	104
m,p-Xylene	103
o-Xylene	107
Styrene	108
Bromoform	94
Cumene	105
1,1,2,2-Tetrachloroethane	109
Propylbenzene	98
4-Ethyltoluene	99
1,3,5-Trimethylbenzene	104
1,2,4-Trimethylbenzene	111
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	110
alpha-Chlorotoluene	99
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	105
Hexachlorobutadiene	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. - toll free (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager DAVID POWERS

Collected by: (Print and Sign) TUSTIN FINGER / AMANDA BULLOCK #97

Company MWH Email TUSTIN.FINGER@MWH.COM

Address 775 W. JACKSON BLVD City CHICAGO State IL Zip 60604
SUITE 1400

Phone (312) 831-3000 Fax (312) 831-3021

Project Info:

P.O. # _____

Project # 4050581.098101

Project Name BLACKWELL

Turn Around Time:

☒ Normal

☐ Rush

specify _____

Lab Use Only

Pressurized by: _____

Date: _____

Pressurization Gas: _____

N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<u>01A</u>	<u>BW-LFG-STACK - 47A</u>	<u>33794</u>	<u>9/10/08</u>	<u>0730-1530</u>	<u>TD14A / ASTM 1945D</u>	<u>-30" Hg</u>	<u>-4.5" Hg</u>		

Relinquished by: (signature) Date/Time

[Signature] 9/10/08 1600

Relinquished by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Monica Green AR 9/10/08

Received by: (signature) Date/Time

Received by: (signature) Date/Time

Notes:

* PLEASE CHECK FLOW CONTROLLER TO
VERIFY IT WAS NOT DAMAGED DURING
SHIPPING, THUS AFFECTING SAMPLE RESULTS.

Lab
Use
Only

Shipper Name

Fed. Ex 8417 68669566

Air Bill #

Temp (°C)

NA

Condition

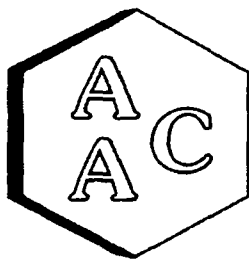
Good

Custody, Seals Intact?

Yes No (None)

Work Order #

0809202



Atmospheric Analysis & Consulting, Inc.

CLIENT : MWH Americas
AAC PROJECT NO. : 080577
REPORT DATE : 09/16/2008

On September 11, 2008 Atmospheric Analysis & Consulting, Inc. received one (1) Summa Canister for Total non-methane organic compounds analysis by EPA 25C, and Fixed Gases analysis by EPA 3C. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab No.	Initial Pressure	Final Pressure
BW-LFGSTACK-47A	080577-35127	642.8	900.8

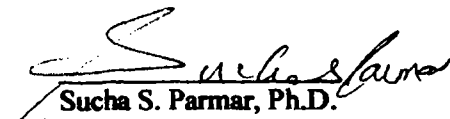
EPA 3C - An aliquot of the gaseous sample is injected into the GC/TCD for analysis following EPA 3C as specified in the SOW.

EPA 25C Analysis - Up to a 1 mL aliquot of samples is injected into the GC/FID/TCA for analysis in triplicate following EPA 25C as specified in the SOW.

No problems were encountered during receiving, preparation, and/ or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI- EPA 25C, EPA 3C.

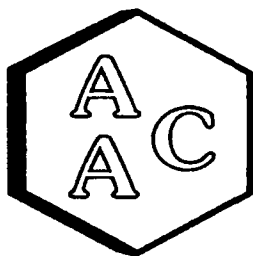
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Release of the data contained in this hardcopy data package and its electronic data deliverable submitted on diskette has been authorized by the Laboratory Director or his designee, as verified by the following signature.

If you have any questions or require further explanation of data results, please contact the undersigned.


Sucha S. Parmar, Ph.D.
President

This report consists of 7 pages.





Atmospheric Analysis & Consulting, Inc.

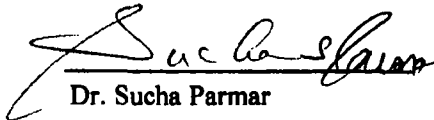
Laboratory Analysis Report

Client: : MWH Americas
Project No. : 080577
Matrix : Air
Units : %

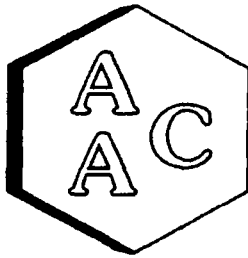
Sampling Date : 09/10/2008
Receiving Date : 09/11/2008
Analysis Date : 09/11-15/2008
Report Date : 09/16/2008

EPA Method 3C

Detection Limit: 0.1 %		Analyte					
Client ID	AAC ID	Hydrogen	Oxygen	Nitrogen	CO	Methane	CO2
BW-LFGSTACK-47A	080577-35127	<PQL	1.4	11.8	<PQL	56.5	30.4


Dr. Sucha Parmar
Technical Director





Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report


Client : MWH Americas
Project No. : 080577
Matrix : Air
Units : ppmv

Sampling Date : 09/10/2008
Receiving Date : 09/11/2008
Analysis Date : 09/11-15/2008
Report Date : 09/16/2008

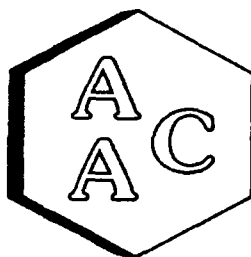
EPA Method 25C

Detection Limit:		1.0 ppmv
Client Sample ID	AAC ID	TNMOC*
BW-LFGSTACK-47A	080577-35127	666.9

***Total Non-Methane Organic Compounds as Methane**


Dr. Sucha Parmar
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 9/11/2008
Analyst: DN

Instrument ID: TCD#1
Units: %

I - Method Blank-EPA Method 3C

AAC ID	Analyte	ME Concentration
Method Blank	Hydrogen	ND
	Oxygen	ND
	Nitrogen	ND
	CO	ND
	Methane	ND
	CO2	ND

II-Laboratory Control Spike & Duplicate - EPA Method 3C

AAC ID	Analyte	Spike Added	LCS Result	LCSB Result	LCS % Rec *	LCSB % Rec *	% RPD***
Lab Control Standards	Hydrogen	20.0	20.0	20.0	100	100	0.1
	Nitrogen	20.0	19.7	19.7	98	99	0.1
	CO	20.0	19.4	19.4	97	97	0.1
	Methane	20.0	19.4	19.5	97	97	0.3
	CO2	20.0	19.5	19.5	98	98	0.1

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
000577-35127	Hydrogen	0.00	0.00	0.0	0.0
	Oxygen	0.97	0.94	1.0	3.7
	Nitrogen	8.25	8.13	8.2	1.5
	CO	0.00	0.00	0.0	0.0
	Methane	39.23	39.32	39.3	0.2
	CO2	21.09	21.20	21.1	0.5


IV-Matrix Spike & Duplicate- EPA Method 3C

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSB Result	MS % Rec **	MSB % Rec **	% RPD***
000577-35127	Hydrogen	0.00	10.0	9.54	9.41	95	94	1.4
	Nitrogen	4.13	10.0	13.54	13.95	94	98	4.2
	CO	0.00	10.0	10.16	10.14	102	101	0.2
	Methane	19.61	10.0	29.21	29.15	96	95	0.7
	CO2	10.54	10.0	20.37	20.36	98	98	0.0

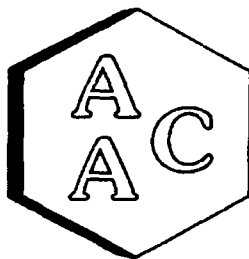
* Must be 85-115%

** Must be 75-125%

*** Must be < 25%


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 9/11/2008

Instrument ID: TCD#1

Analyst: DN

Calb Date: 04/03/08

Opening Calibration Verification Standard

Analyte	xLR**	LR	%RPD*
Hydrogen	1869	1874	0.3
Oxygen***	49346	49897	1.1
Nitrogen	59197	57414	3.1
Carbon Monoxide	57917	56294	2.8
Methane	48425	47381	2.2
Carbon Dioxide	77691	76176	2.0

Closing Calibration Verification Standard

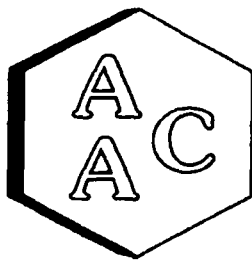
Analyte	xLR**	LR	%RPD*
Hydrogen	1869	1909	2.2
Nitrogen	59197	57601	2.7
Carbon Monoxide	57917	57352	1.0
Methane	48425	48033	0.8
Carbon Dioxide	77691	77613	0.1

* Must be <15%

** Linear Response Factor from Initial Calibration Curve

*** Oxygen from Lab Air





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Analysis Date: 9/15/2008

Analyst: DN

Units: ppmv

Instrument ID: FID#9

Calibration Date: 1/18/2008

I - Opening Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	11263	3.9
CH4	11996	11814	1.5
CO2	11842	11518	2.8
Propane	33025	32159	2.7

II - Method Blank - Method 25C

AAC ID	Analyte	Sample Result
MB	NMEHC	ND

III - Laboratory Control Spike & Duplicate - Method 25C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	NMEHC	50.0	49.6	50.5	99.3	100.9	1.6

IV - Closing Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	11293	3.6
CH4	11996	12077	0.7
CO2	11842	11302	4.7
Propane	33025	31583	4.5

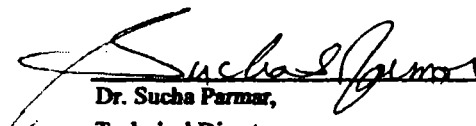
xCF - Average Calibration Factor from Initial Calibration Curve

dCF - Daily Calibration Factor

* Must be <15%

** Must be 90-110 %

*** Must be <20%


Dr. Sucha Parmar,
Technical Director





ATMOSPHERIC ANALYSIS & CONSULTING, INC.
1534 Eastman Avenue, Suite A
Ventura, California 93003
Phone (805) 650-1642 Fax (805) 650-1644
E-mail: aacLab@earthlink.net

AAC Project No. 080577

Page 1 of 1

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client Name MWH			Project Name BLACKWELL			Analysis Requested				Send Report:	
Project Mgr (Print Name) DAVID POWERS			Project Number 4050581, 098101			<div style="display: flex; justify-content: space-around;"><div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 25C MSB</div><div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 3C</div></div>				Attn: JUSTIN FINGER	
Sampler's Name (Print Name) JUSTIN FINGER / AMANDA BUTLER			Sampler's Signature <i>[Signature]</i>							Phone #: (312) 831-3447	
AAC Sample No.	Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type/No. of containers						Fax #: (312) 831-3021
	9/10/08	0730-1530	TIME-INTERGRADED GASES (G)	BW-LFCSTACK-47A	PAH 1	X	X				Send Invoice to:
											Attn: _____
											P.O. # _____
											Turn Around Time
											24-Hr _____ 48-Hr _____
											5 day _____ Normal X
											Other (Specify) _____
											Special Instructions / remarks:
											INITIAL VACUUM = -30" Hg
											FINAL VACUUM = -4.5" Hg
											CANISTER # 00095
Relinquished by (Signature) <i>[Signature]</i>			Print name: JUSTIN FINGER			Date/Time 9/10/08 1600		Received by (Signature) <i>[Signature]</i>		Print Name	
Relinquished by (Signature) _____			Print name: _____			Date/Time 9/11/08 10:00		Received by (Signature) <i>[Signature]</i>		Print Name Benjamin W. Hen	



AN ENVIRONMENTAL ANALYTICAL LABORATORY

12/5/2008

Mr. Dave Powers
MWH Americas, Inc.
175 West Jackson Blvd.
Suite 1900
Chicago IL 60604

Project Name: BLACKWELL
Project #: 4050581.098101

Dear Mr. Dave Powers

The following report includes the data for the above referenced project for sample(s) received on 11/20/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Brandon M. Dunmore'.

Brandon Dunmore
Project Manager

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0811459A

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.098101 BLACKWELL
DATE RECEIVED:	11/20/2008	CONTACT:	Brandon Dunmore
DATE COMPLETED:	12/05/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-48A	Modified TO-14A	3.5 "Hg	5 psi
02A	Lab Blank	Modified TO-14A	NA	NA
03A	CCV	Modified TO-14A	NA	NA
04A	LCS	Modified TO-14A	NA	NA
04AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 12/05/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE

Modified TO-14A
MWH Americas, Inc.
Workorder# 0811459A

One 6 Liter Summa Canister sample was received on November 20, 2008. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-14A	ATL Modifications
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD<=30%, two compounds allowed up to 40%
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Moisture control	Nafion Dryer	Multisorbent trap
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv and 0.8 ppbv for compounds reported at 2.0 ppbv) may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: BW-LFGSTACK-48A

Lab ID#: 0811459A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	61	3900	300	19000
Freon 114	61	470	430	3300
Vinyl Chloride	61	4800	160	12000
Chloroethane	61	490	160	1300
Freon 11	61	31 J	340	170 J
Acetone	240	400	580	940
2-Propanol	240	74 J	600	180 J
Methylene Chloride	61	150	210	520
trans-1,2-Dichloroethene	61	180	240	740
Hexane	61	870	210	3100
1,1-Dichloroethane	61	110	250	460
2-Butanone (Methyl Ethyl Ketone)	61	560	180	1600
cis-1,2-Dichloroethene	61	2000	240	7800
Tetrahydrofuran	61	120	180	370
1,1,1-Trichloroethane	61	21 J	330	120 J
Cyclohexane	61	450	210	1600
2,2,4-Trimethylpentane	61	76	280	350
Benzene	61	1100	190	3400
Heptane	61	2000	250	8300
Trichloroethene	61	550	330	3000
1,2-Dichloropropane	61	110	280	510
1,4-Dioxane	240	170 J	880	620 J
4-Methyl-2-pentanone	61	380	250	1600
Toluene	61	19000	230	72000
Tetrachloroethene	61	430	410	2900
Chlorobenzene	61	240	280	1100
Ethyl Benzene	61	3600	260	16000
m,p-Xylene	61	7400	260	32000
o-Xylene	61	2200	260	9400
Cumene	61	330	300	1600
Propylbenzene	61	620	300	3000
4-Ethyltoluene	61	1900	300	9200
1,3,5-Trimethylbenzene	61	660	300	3200
1,2,4-Trimethylbenzene	61	1800	300	9000
1,4-Dichlorobenzene	61	840	370	5100
1,2-Dichlorobenzene	61	24 J	370	140 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-48A

Lab ID#: 0811459A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120312	Date of Collection:	11/19/08	
Dil. Factor:	122	Date of Analysis:	12/3/08 08:03 PM	
Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	61	3900	300	19000
Freon 114	61	470	430	3300
Chloromethane	240	Not Detected	500	Not Detected
Vinyl Chloride	61	4800	160	12000
1,3-Butadiene	61	Not Detected	130	Not Detected
Bromomethane	61	Not Detected	240	Not Detected
Chloroethane	61	490	160	1300
Freon 11	61	31 J	340	170 J
Ethanol	240	Not Detected	460	Not Detected
Freon 113	61	Not Detected	470	Not Detected
1,1-Dichloroethene	61	Not Detected	240	Not Detected
Acetone	240	400	580	940
2-Propanol	240	74 J	600	180 J
Carbon Disulfide	61	Not Detected	190	Not Detected
3-Chloropropene	240	Not Detected	760	Not Detected
Methylene Chloride	61	150	210	520
Methyl tert-butyl ether	61	Not Detected	220	Not Detected
trans-1,2-Dichloroethene	61	180	240	740
Hexane	61	870	210	3100
1,1-Dichloroethane	61	110	250	460
2-Butanone (Methyl Ethyl Ketone)	61	560	180	1600
cis-1,2-Dichloroethene	61	2000	240	7800
Tetrahydrofuran	61	120	180	370
Chloroform	61	Not Detected	300	Not Detected
1,1,1-Trichloroethane	61	21 J	330	120 J
Cyclohexane	61	450	210	1600
Carbon Tetrachloride	61	Not Detected	380	Not Detected
2,2,4-Trimethylpentane	61	76	280	350
Benzene	61	1100	190	3400
1,2-Dichloroethane	61	Not Detected	250	Not Detected
Heptane	61	2000	250	8300
Trichloroethene	61	550	330	3000
1,2-Dichloropropane	61	110	280	510
1,4-Dioxane	240	170 J	880	620 J
Bromodichloromethane	61	Not Detected	410	Not Detected
cis-1,3-Dichloropropene	61	Not Detected	280	Not Detected
4-Methyl-2-pentanone	61	380	250	1600
Toluene	61	19000	230	72000
trans-1,3-Dichloropropene	61	Not Detected	280	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-48A

Lab ID#: 0811459A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120312	Date of Collection:	11/19/08
Dil. Factor:	122	Date of Analysis:	12/3/08 08:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	61	Not Detected	330	Not Detected
Tetrachloroethene	61	430	410	2900
2-Hexanone	240	Not Detected	1000	Not Detected
Dibromochloromethane	61	Not Detected	520	Not Detected
1,2-Dibromoethane (EDB)	61	Not Detected	470	Not Detected
Chlorobenzene	61	240	280	1100
Ethyl Benzene	61	3600	260	16000
m,p-Xylene	61	7400	260	32000
o-Xylene	61	2200	260	9400
Styrene	61	Not Detected	260	Not Detected
Bromoform	61	Not Detected	630	Not Detected
Cumene	61	330	300	1600
1,1,2,2-Tetrachloroethane	61	Not Detected	420	Not Detected
Propylbenzene	61	620	300	3000
4-Ethyltoluene	61	1900	300	9200
1,3,5-Trimethylbenzene	61	660	300	3200
1,2,4-Trimethylbenzene	61	1800	300	9000
1,3-Dichlorobenzene	61	Not Detected	370	Not Detected
1,4-Dichlorobenzene	61	840	370	5100
alpha-Chlorotoluene	61	Not Detected	320	Not Detected
1,2-Dichlorobenzene	61	24 J	370	140 J
1,2,4-Trichlorobenzene	240	Not Detected	1800	Not Detected
Hexachlorobutadiene	240	Not Detected	2600	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811459A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120306c	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	12/3/08 02:06 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	0.17 J	4.1	0.34 J
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	0.11 J	1.6	0.34 J
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	0.25 J	1.7	0.88 J
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	0.067 J	2.0	0.27 J
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	0.049 J	1.9	0.18 J
trans-1,3-Dichloropropene	0.50	0.17 J	2.3	0.79 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811459A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120306c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 02:06 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	0.028 J	4.2	0.24 J
1,2-Dibromoethane (EDB)	0.50	0.13 J	3.8	1.0 J
Chlorobenzene	0.50	0.084 J	2.3	0.39 J
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	0.061 J	2.1	0.26 J
Bromoform	0.50	0.062 J	5.2	0.64 J
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	0.14 J	3.0	0.87 J
1,4-Dichlorobenzene	0.50	0.20 J	3.0	1.2 J
alpha-Chlorotoluene	0.50	0.16 J	2.6	0.84 J
1,2-Dichlorobenzene	0.50	0.12 J	3.0	0.73 J
1,2,4-Trichlorobenzene	2.0	0.31 J	15	2.3 J
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0811459A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 10:48 AM

Compound	%Recovery
Freon 12	114
Freon 114	107
Chloromethane	110
Vinyl Chloride	100
1,3-Butadiene	97
Bromomethane	100
Chloroethane	116
Freon 11	117
Ethanol	88
Freon 113	96
1,1-Dichloroethene	103
Acetone	96
2-Propanol	92
Carbon Disulfide	93
3-Chloropropene	89
Methylene Chloride	111
Methyl tert-butyl ether	99
trans-1,2-Dichloroethene	93
Hexane	93
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	85
cis-1,2-Dichloroethene	96
Tetrahydrofuran	98
Chloroform	91
1,1,1-Trichloroethane	100
Cyclohexane	90
Carbon Tetrachloride	103
2,2,4-Trimethylpentane	93
Benzene	88
1,2-Dichloroethane	110
Heptane	95
Trichloroethene	100
1,2-Dichloropropane	98
1,4-Dioxane	86
Bromodichloromethane	105
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	94
Toluene	98
trans-1,3-Dichloropropene	93



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0811459A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 10:48 AM

Compound	%Recovery
1,1,2-Trichloroethane	89
Tetrachloroethene	94
2-Hexanone	83
Dibromochloromethane	98
1,2-Dibromoethane (EDB)	88
Chlorobenzene	93
Ethyl Benzene	92
m,p-Xylene	94
o-Xylene	94
Styrene	83
Bromoform	102
Cumene	89
1,1,2,2-Tetrachloroethane	97
Propylbenzene	101
4-Ethyltoluene	99
1,3,5-Trimethylbenzene	86
1,2,4-Trimethylbenzene	88
1,3-Dichlorobenzene	95
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	96
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811459A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 11:23 AM

Compound	%Recovery
Freon 12	120
Freon 114	108
Chloromethane	122
Vinyl Chloride	112
1,3-Butadiene	98
Bromomethane	114
Chloroethane	128
Freon 11	122
Ethanol	112
Freon 113	116
1,1-Dichloroethene	121
Acetone	101
2-Propanol	109
Carbon Disulfide	101
3-Chloropropene	98
Methylene Chloride	125
Methyl tert-butyl ether	116
trans-1,2-Dichloroethene	100
Hexane	112
1,1-Dichloroethane	111
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	109
Tetrahydrofuran	112
Chloroform	102
1,1,1-Trichloroethane	111
Cyclohexane	100
Carbon Tetrachloride	114
2,2,4-Trimethylpentane	108
Benzene	94
1,2-Dichloroethane	117
Heptane	104
Trichloroethene	105
1,2-Dichloropropane	102
1,4-Dioxane	94
Bromodichloromethane	110
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	101
Toluene	106
trans-1,3-Dichloropropene	101



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811459A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 11:23 AM

Compound	%Recovery
1,1,2-Trichloroethane	97
Tetrachloroethene	102
2-Hexanone	94
Dibromochloromethane	104
1,2-Dibromoethane (EDB)	92
Chlorobenzene	99
Ethyl Benzene	98
m,p-Xylene	100
o-Xylene	100
Styrene	93
Bromoform	110
Cumene	99
1,1,2,2-Tetrachloroethane	104
Propylbenzene	110
4-Ethyltoluene	109
1,3,5-Trimethylbenzene	90
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	102
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	100
Hexachlorobutadiene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0811459A-04AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name: 5120304
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 12/3/08 11:59 AM

Compound	%Recovery
Freon 12	117
Freon 114	110
Chloromethane	122
Vinyl Chloride	113
1,3-Butadiene	100
Bromomethane	114
Chloroethane	127
Freon 11	120
Ethanol	116
Freon 113	118
1,1-Dichloroethene	122
Acetone	105
2-Propanol	111
Carbon Disulfide	104
3-Chloropropene	101
Methylene Chloride	127
Methyl tert-butyl ether	115
trans-1,2-Dichloroethene	104
Hexane	110
1,1-Dichloroethane	111
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	109
Tetrahydrofuran	112
Chloroform	101
1,1,1-Trichloroethane	109
Cyclohexane	101
Carbon Tetrachloride	112
2,2,4-Trimethylpentane	107
Benzene	94
1,2-Dichloroethane	115
Heptane	104
Trichloroethene	105
1,2-Dichloropropane	105
1,4-Dioxane	95
Bromodichloromethane	109
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	102
Toluene	107
trans-1,3-Dichloropropene	102



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0811459A-04AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	5120304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 11:59 AM

Compound	%Recovery
1,1,2-Trichloroethane	97
Tetrachloroethene	102
2-Hexanone	96
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	92
Chlorobenzene	100
Ethyl Benzene	98
m,p-Xylene	99
o-Xylene	100
Styrene	93
Bromoform	110
Cumene	99
1,1,2,2-Tetrachloroethane	103
Propylbenzene	110
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	92
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	102
1,4-Dichlorobenzene	101
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	101
Hexachlorobutadiene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

12/5/2008

Mr. Dave Powers
MWH Americas, Inc.
175 West Jackson Blvd.
Suite 1900
Chicago IL 60604

Project Name: BLACKWELL
Project #: 4050581.098101

Dear Mr. Dave Powers

The following report includes the data for the above referenced project for sample(s) received on 11/20/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1945 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Brandon M. Dunmore'.

Brandon Dunmore
Project Manager

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0811459B

Work Order Summary

CLIENT: Mr. Dave Powers
MWH Americas, Inc.
175 West Jackson Blvd.
Suite 1900
Chicago, IL 60604

BILL TO: Accounts Payable
MWH Americas, Inc.
PO Box 6610
Broomfield, CO 80021

PHONE: 312-831-3000 x3432

P.O. #

FAX: 312-831-3021

PROJECT # 4050581.098101 BLACKWELL

DATE RECEIVED: 11/20/2008

CONTACT: Brandon Dunmore

DATE COMPLETED: 12/05/2008

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-48A	Modified ASTM D-1945	3.5 "Hg	5 psi
02A	Lab Blank	Modified ASTM D-1945	NA	NA
02B	Lab Blank	Modified ASTM D-1945	NA	NA
03A	LCS	Modified ASTM D-1945	NA	NA
03AA	LCSD	Modified ASTM D-1945	NA	NA
04A	LCS	Modified ASTM D-1945	NA	NA
04AA	LCSD	Modified ASTM D-1945	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 12/05/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1945
MWH Americas, Inc.
Workorder# 0811459B

One 6 Liter Summa Canister sample was received on November 20, 2008. The laboratory performed analysis via modified ASTM Method D-1945 for Methane and fixed gases in natural gas using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1945	ATL Modifications
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 85-115%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum 3-point linear calibration is performed. The acceptance criterion is %RSD <= 15%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+ Hydrocarbons).
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Since Nitrogen is used to pressurize samples, the Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are

below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Six qualifiers may have been used on the data analysis sheets and indicate as follows:

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: BW-LFGSTACK-48A

Lab ID#: 0811459B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.15	0.71
Nitrogen	0.15	10
Methane	0.00015	57
Carbon Dioxide	0.015	32
Ethane	0.0015	0.0025
Ethene	0.0015	0.0014 J
Propane	0.0015	0.0012 J
Isobutane	0.0015	0.00044 J
Butane	0.0015	0.00012 J
Pentane	0.0015	0.00010 J
C6+	0.015	0.013 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-48A

Lab ID#: 0811459B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9120212	Date of Collection: 11/19/08
Dil. Factor:	1.52	Date of Analysis: 12/2/08 02:22 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.15	0.71
Nitrogen	0.15	10
Carbon Monoxide	0.015	Not Detected
Methane	0.00015	57
Carbon Dioxide	0.015	32
Ethane	0.0015	0.0025
Ethene	0.0015	0.0014 J
Acetylene	0.0015	Not Detected
Propane	0.0015	0.0012 J
Isobutane	0.0015	0.00044 J
Butane	0.0015	0.00012 J
Neopentane	0.0015	Not Detected
Isopentane	0.0015	Not Detected
Pentane	0.0015	0.00010 J
C6+	0.015	0.013 J
Hydrogen	0.015	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811459B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9120209a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/2/08 12:33 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.011 J
Nitrogen	0.10	0.059 J
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected
Acetylene	0.0010	Not Detected
Propane	0.0010	Not Detected
Isobutane	0.0010	Not Detected
Butane	0.0010	Not Detected
Neopentane	0.0010	Not Detected
Isopentane	0.0010	Not Detected
Pentane	0.0010	Not Detected
C6+	0.010	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811459B-02B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9120208ba	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/2/08 12:09 PM

Compound	Rpt. Limit (%)	Amount (%)
Hydrogen	0.010	Not Detected

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811459B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9120204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/2/08 09:33 AM

Compound	%Recovery
Oxygen	101
Nitrogen	100
Carbon Monoxide	103
Methane	102
Carbon Dioxide	101
Ethane	102
Ethene	101
Acetylene	97
Propane	102
Isobutane	101
Butane	101
Neopentane	101
Isopentane	100
Pentane	101
C6+	102

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0811459B-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9120231	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/2/08 11:44 PM

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Monoxide	103
Methane	102
Carbon Dioxide	100
Ethane	101
Ethene	102
Acetylene	98
Propane	102
Isobutane	102
Butane	102
Neopentane	101
Isopentane	101
Pentane	101
C6+	103

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811459B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name: 9120205b
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 12/2/08 09:58 AM

Compound	%Recovery
Hydrogen	100

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0811459B-04AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9120232b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/08 12:09 AM

Compound	%Recovery
Hydrogen	100

Container Type: NA - Not Applicable



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hot line (800) 437-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

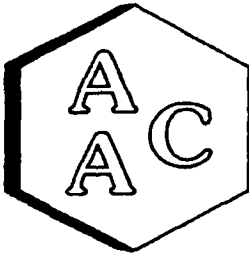
Project Manager DAVID POWERS
Collected by: (Print and Sign) JUSTIN FINCH
Company MMH Email JUSTIN.FINCH@MMH.COM
Address 175 W. JACKSON BLVD City CHICAGO State IL Zip 60604
Phone (312) 531-3000 Fax (312) 831-3021

Project Info:	Turn Around Time:	Lab Use Only Pressurized by: Date: Pressurization Gas: N ₂ He
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush specify	
P.O. #		
Project # <u>4050581-098101</u>		
Project Name <u>BLACKWELL</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<u>01A</u>	<u>BW-LFCSTOCK-48A</u>	<u>33980</u>	<u>11/19/08</u>	<u>0805-1605</u>	<u>TO14A/ASTM 1945D</u>	<u>-24" Hg</u>	<u>-6" Hg</u>		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/19/08 1630</u>	Received by: (signature) <u>Monica Grogan</u> Date/Time <u>11/19/08 1605</u>	Notes: PLEASE CHECK FLOW CONTROLLER TO VERIFY IF IT'S SUSTAINED SAMPLES DURING SHIPPING, THIS AFFECTING SAMPLE RESULTS
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>Fed Ex</u>	Air Bill # _____	Temp (°C) <u>NA</u>	Condition <u>Good</u>	Custody Seals Intact? <u>None</u>	Work Order # <u>0811459</u>
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Atmospheric Analysis & Consulting, Inc.

CLIENT : MWH Americas
AAC PROJECT NO. : 080715
REPORT DATE : 11/25/2008

On November 20, 2008 Atmospheric Analysis & Consulting, Inc. received one (1) Summa Canister for Total non-methane organic compounds analysis by EPA 25C. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

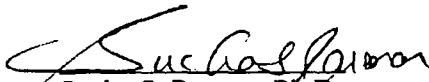
Client ID	Lab No.	Initial Pressure	Final Pressure
BW-LFGSTACK-48A	080715-36074	735.3	900.2

EPA 25C Analysis - Up to a 1 mL aliquot of samples is injected into the GC/FID/TCA for analysis in triplicate following EPA 25C as specified in the SOW.

No problems were encountered during receiving, preparation, and/ or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI- EPA 25C.

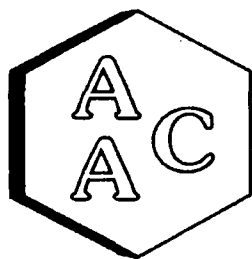
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Release of the data contained in this hardcopy data package and its electronic data deliverable submitted on diskette has been authorized by the Laboratory Director or his designee, as verified by the following signature.

If you have any questions or require further explanation of data results, please contact the undersigned.


Sucha S. Parmar, Ph.D.
President

This report consists of 6 pages.





Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

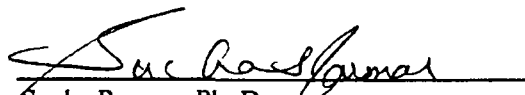
Client : MWH Americas
Project No. : 080715
Matrix : Air
Units : ppmv

Sampling Date : 11/19/2008
Receiving Date : 11/20/2008
Analysis Date : 11/24/2008
Report Date : 11/25/2008

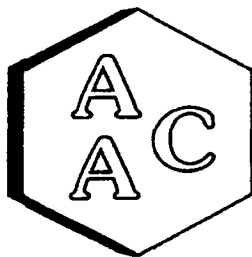
EPA Method 25C

<i>Detection Limit:</i>		1.0 ppmv
Client Sample ID	AAC ID	TNMOC*
BW-LFGSTACK-48A	080715-36074	236.9

*Total Non-Methane Organic Compounds as Methane


Sucha Parmar, Ph. D
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 11/24/2008

Analyst: DN

Instrument ID: TCD#1

Units: %

I - Method Blank-EPA Method 3C

AAC ID	Analyte	MB Concentration
Method Blank	Hydrogen	ND
	Oxygen	ND
	Nitrogen	ND
	CO	ND
	Methane	ND
	CO2	ND

II-Laboratory Control Spike & Duplicate - EPA Method 3C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec *	LCSD % Rec *	% RPD***
Lab Control Standards	Hydrogen	20.0	19.7	19.6	98	98	0.4
	Nitrogen	20.0	19.0	19.1	95	95	0.6
	CO	20.0	19.0	19.1	95	96	0.4
	Methane	20.0	19.1	19.2	95	96	0.5
	CO2	20.0	19.1	19.2	96	96	0.4

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
080715-36074	Hydrogen	0.00	0.00	0.0	0.0
	Oxygen	0.69	0.68	0.7	1.5
	Nitrogen	9.63	9.58	9.6	0.5
	CO	0.00	0.00	0.0	0.0
	Methane	43.68	43.68	43.7	0.0
	CO2	24.48	24.51	24.5	0.1

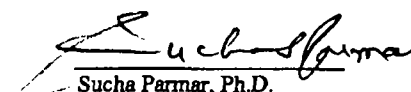
IV-Matrix Spike & Duplicate- EPA Method 3C

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
080715-36074	Hydrogen	0.00	10.0	9.41	9.35	94	93	0.7
	Nitrogen	4.81	10.0	14.04	14.25	92	94	2.3
	CO	0.00	10.0	9.95	9.92	99	99	0.3
	Methane	21.84	10.0	31.48	31.40	96	96	0.9
	CO2	12.24	10.0	21.92	21.87	97	96	0.5

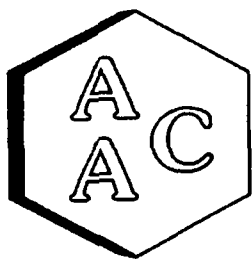
* Must be 85-115%

** Must be 75-125%

*** Must be < 25%


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 11/24/2008

Instrument ID: TCD#1

Analyst: DN

Calb Date: 04/03/08

Opening Calibration Verification Standard

Analyte	xLR**	LR	%RPD*
Hydrogen	1869	1849	1.1
Oxygen***	49346	49212	0.3
Nitrogen	59197	55857	5.8
Carbon Monoxide	57917	54930	5.3
Methane	48425	46054	5.0
Carbon Dioxide	77691	74423	4.3

Closing Calibration Verification Standard

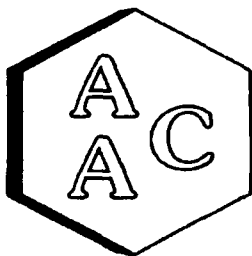
Analyte	xLR**	LR	%RPD*
Hydrogen	1869	1860	0.5
Nitrogen	59197	56623	4.4
Carbon Monoxide	57917	55870	3.6
Methane	48425	46762	3.5
Carbon Dioxide	77691	75232	3.2

* Must be <15%

** Linear Response Factor from Initial Calibration Curve

*** Oxygen from Lab Air





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Analysis Date: 11/24/2008

Analyst: DN

Units: ppmv

Instrument ID: FID#9

Calibration Date: 1/18/2008

I - Opening Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	11676	0.3
CH4	11996	12384	3.2
CO2	11842	11972	1.1
Propane	33025	33364	1.0

II - Method Blank - Method 25C

AAC ID	Analyte	Sample Result
MB	NMEHC	ND

III - Laboratory Control Spike & Duplicate - Method 25C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	NMEHC	50.0	49.9	45.5	99.7	91.0	9.1

IV - Closing Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	9680	19.0
CH4	11996	12583	4.8
CO2	11842	12918	8.7
Propane	33025	31806	3.8

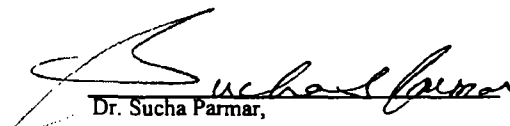
xCF - Average Calibration Factor from Initial Calibration Curve

dCF - Daily Calibration Factor

* Must be <15%

** Must be 90-110 %

*** Must be <20%


Dr. Sucha Parmar,
Technical Director



ATMOSPHERIC ANALYSIS & CONSULTING, INC.
1534 Eastman Avenue, Suite A
Ventura, California 93003
Phone (805) 650-1642 Fax (805) 650-1644
E-mail: aacLab@earthlink.net



AN ENVIRONMENTAL ANALYTICAL LABORATORY

1/29/2009

Mr. Dave Powers
MWH Americas, Inc.
175 West Jackson Blvd.
Suite 1900
Chicago IL 60604

Project Name: Blackwell
Project #: 4050581.098101

Dear Mr. Dave Powers

The following report includes the data for the above referenced project for sample(s) received on 1/22/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Brandon M. Dunmore'.

Brandon Dunmore
Project Manager

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0901401A

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.098101 Blackwell
DATE RECEIVED:	01/22/2009	CONTACT:	Brandon Dunmore
DATE COMPLETED:	01/29/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-49A	Modified TO-14A	1.5 "Hg	5 psi
02A	Lab Blank	Modified TO-14A	NA	NA
03A	CCV	Modified TO-14A	NA	NA
04A	LCS	Modified TO-14A	NA	NA
04AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 01/29/09

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE

**Modified TO-14A
MWH Americas, Inc.
Workorder# 0901401A**

One 6 Liter Summa Canister sample was received on January 22, 2009. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-14A	ATL Modifications
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD<=30%, two compounds allowed up to 40%
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Moisture control	Nafion Dryer	Multisorbent trap
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- rl-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: BW-LFGSTACK-49A

Lab ID#: 0901401A-01A

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	70	2200	350	11000
Freon 114	70	390	490	2700
Vinyl Chloride	70	4600	180	12000
Chloroethane	70	530	190	1400
Freon 11	70	15 J	400	84 J
Ethanol	280	740	530	1400
Acetone	280	120 J	670	270 J
Methylene Chloride	70	100	240	360
trans-1,2-Dichloroethene	70	140	280	570
Hexane	70	1000	250	3700
1,1-Dichloroethane	70	54 J	280	220 J
2-Butanone (Methyl Ethyl Ketone)	70	220	210	660
cis-1,2-Dichloroethene	70	740	280	3000
Tetrahydrofuran	70	120 J	210	350 J
Cyclohexane	70	520	240	1800
Benzene	70	1100	220	3500
Heptane	70	2000	290	8300
Trichloroethene	70	260	380	1400
1,2-Dichloropropane	70	100	320	470
Toluene	70	14000	260	54000
Tetrachloroethene	70	170	480	1100
Chlorobenzene	70	310	320	1400
Ethyl Benzene	70	3500	310	15000
m,p-Xylene	70	7200	310	31000
o-Xylene	70	2100	310	9200
Styrene	70	150	300	630
Cumene	70	500	350	2400
Propylbenzene	70	640	350	3100
4-Ethyltoluene	70	1800	350	8600
1,3,5-Trimethylbenzene	70	730	350	3600
1,2,4-Trimethylbenzene	70	2000	350	10000
1,4-Dichlorobenzene	70	700	420	4200
1,2-Dichlorobenzene	70	23 J	420	140 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-49A

Lab ID#: 0901401A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012606	Date of Collection:	1/21/09	
Dil. Factor:	141	Date of Analysis:	1/26/09 12:04 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	70	2200	350	11000
Freon 114	70	390	490	2700
Chloromethane	280	Not Detected	580	Not Detected
Vinyl Chloride	70	4600	180	12000
1,3-Butadiene	70	Not Detected	160	Not Detected
Bromomethane	70	Not Detected	270	Not Detected
Chloroethane	70	530	190	1400
Freon 11	70	15 J	400	84 J
Ethanol	280	740	530	1400
Freon 113	70	Not Detected	540	Not Detected
1,1-Dichloroethene	70	Not Detected	280	Not Detected
Acetone	280	120 J	670	270 J
2-Propanol	280	Not Detected	690	Not Detected
Carbon Disulfide	70	Not Detected	220	Not Detected
3-Chloropropene	280	Not Detected	880	Not Detected
Methylene Chloride	70	100	240	360
Methyl tert-butyl ether	70	Not Detected	250	Not Detected
trans-1,2-Dichloroethene	70	140	280	570
Hexane	70	1000	250	3700
1,1-Dichloroethane	70	54 J	280	220 J
2-Butanone (Methyl Ethyl Ketone)	70	220	210	660
cis-1,2-Dichloroethene	70	740	280	3000
Tetrahydrofuran	70	120 J	210	350 J
Chloroform	70	Not Detected	340	Not Detected
1,1,1-Trichloroethane	70	Not Detected	380	Not Detected
Cyclohexane	70	520	240	1800
Carbon Tetrachloride	70	Not Detected	440	Not Detected
2,2,4-Trimethylpentane	70	Not Detected	330	Not Detected
Benzene	70	1100	220	3500
1,2-Dichloroethane	70	Not Detected	280	Not Detected
Heptane	70	2000	290	8300
Trichloroethene	70	260	380	1400
1,2-Dichloropropane	70	100	320	470
1,4-Dioxane	280	Not Detected	1000	Not Detected
Bromodichloromethane	70	Not Detected	470	Not Detected
cis-1,3-Dichloropropene	70	Not Detected	320	Not Detected
4-Methyl-2-pentanone	70	Not Detected	290	Not Detected
Toluene	70	14000	260	54000
trans-1,3-Dichloropropene	70	Not Detected	320	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-49A

Lab ID#: 0901401A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012606	Date of Collection: 1/21/09
Dil. Factor:	141	Date of Analysis: 1/26/09 12:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	70	Not Detected	380	Not Detected
Tetrachloroethene	70	170	480	1100
2-Hexanone	280	Not Detected	1200	Not Detected
Dibromochloromethane	70	Not Detected	600	Not Detected
1,2-Dibromoethane (EDB)	70	Not Detected	540	Not Detected
Chlorobenzene	70	310	320	1400
Ethyl Benzene	70	3500	310	15000
m,p-Xylene	70	7200	310	31000
o-Xylene	70	2100	310	9200
Styrene	70	150	300	630
Bromoform	70	Not Detected	730	Not Detected
Cumene	70	500	350	2400
1,1,2,2-Tetrachloroethane	70	Not Detected	480	Not Detected
Propylbenzene	70	640	350	3100
4-Ethyltoluene	70	1800	350	8600
1,3,5-Trimethylbenzene	70	730	350	3600
1,2,4-Trimethylbenzene	70	2000	350	10000
1,3-Dichlorobenzene	70	Not Detected	420	Not Detected
1,4-Dichlorobenzene	70	700	420	4200
alpha-Chlorotoluene	70	Not Detected	360	Not Detected
1,2-Dichlorobenzene	70	23 J	420	140 J
1,2,4-Trichlorobenzene	280	Not Detected	2100	Not Detected
Hexachlorobutadiene	280	Not Detected	3000	Not Detected

J = Estimated value.

J = Estimated value due to bias in the CCV.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0901401A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

MODIFIED EXTRACT METHOD TO MATCH GC/MS FILE SIZE				
File Name:	t012605a	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 1/26/09 10:53 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	0.075 J	1.6	0.23 J
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	0.12 J	1.7	0.41 J
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	0.064 J	1.6	0.20 J
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	0.23 J	7.2	0.82 J
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	0.12 J	2.3	0.54 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0901401A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012605a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 10:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	0.091 J	3.8	0.70 J
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	0.10 J	2.1	0.44 J
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	0.14 J	3.4	1.0 J
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	0.12 J	3.0	0.73 J
1,4-Dichlorobenzene	0.50	0.16 J	3.0	0.96 J
alpha-Chlorotoluene	0.50	0.26 J	2.6	1.3 J
1,2-Dichlorobenzene	0.50	0.16 J	3.0	0.97 J
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0901401A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 08:30 AM

Compound	%Recovery
Freon 12	117
Freon 114	98
Chloromethane	121
Vinyl Chloride	112
1,3-Butadiene	106
Bromomethane	100
Chloroethane	110
Freon 11	106
Ethanol	113
Freon 113	96
1,1-Dichloroethene	107
Acetone	109
2-Propanol	119
Carbon Disulfide	100
3-Chloropropene	112
Methylene Chloride	109
Methyl tert-butyl ether	133 Q
trans-1,2-Dichloroethene	105
Hexane	117
1,1-Dichloroethane	118
2-Butanone (Methyl Ethyl Ketone)	120
cis-1,2-Dichloroethene	121
Tetrahydrofuran	131 Q
Chloroform	120
1,1,1-Trichloroethane	118
Cyclohexane	110
Carbon Tetrachloride	118
2,2,4-Trimethylpentane	118
Benzene	106
1,2-Dichloroethane	120
Heptane	110
Trichloroethene	107
1,2-Dichloropropane	109
1,4-Dioxane	105
Bromodichloromethane	113
cis-1,3-Dichloropropene	113
4-Methyl-2-pentanone	113
Toluene	105
trans-1,3-Dichloropropene	121



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0901401A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 08:30 AM

Compound	%Recovery
1,1,2-Trichloroethane	107
Tetrachloroethene	104
2-Hexanone	116
Dibromochloromethane	114
1,2-Dibromoethane (EDB)	112
Chlorobenzene	106
Ethyl Benzene	109
m,p-Xylene	108
o-Xylene	107
Styrene	108
Bromoform	111
Cumene	109
1,1,2,2-Tetrachloroethane	111
Propylbenzene	114
4-Ethyltoluene	116
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	95
1,4-Dichlorobenzene	101
alpha-Chlorotoluene	116
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	85

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0901401A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 09:05 AM

Compound	%Recovery
Freon 12	106
Freon 114	91
Chloromethane	108
Vinyl Chloride	102
1,3-Butadiene	95
Bromomethane	90
Chloroethane	103
Freon 11	102
Ethanol	105
Freon 113	110
1,1-Dichloroethene	123
Acetone	117
2-Propanol	128
Carbon Disulfide	100
3-Chloropropene	119
Methylene Chloride	120
Methyl tert-butyl ether	142 Q
trans-1,2-Dichloroethene	110
Hexane	127
1,1-Dichloroethane	130
2-Butanone (Methyl Ethyl Ketone)	129
cis-1,2-Dichloroethene	128
Tetrahydrofuran	134
Chloroform	124
1,1,1-Trichloroethane	118
Cyclohexane	111
Carbon Tetrachloride	119
2,2,4-Trimethylpentane	118
Benzene	110
1,2-Dichloroethane	129
Heptane	118
Trichloroethene	112
1,2-Dichloropropane	116
1,4-Dioxane	111
Bromodichloromethane	118
cis-1,3-Dichloropropene	116
4-Methyl-2-pentanone	123
Toluene	113
trans-1,3-Dichloropropene	128



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0901401A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 09:05 AM

Compound	%Recovery
1,1,2-Trichloroethane	115
Tetrachloroethene	110
2-Hexanone	128
Dibromochloromethane	120
1,2-Dibromoethane (EDB)	112
Chlorobenzene	107
Ethyl Benzene	110
m,p-Xylene	108
o-Xylene	108
Styrene	109
Bromoform	112
Cumene	112
1,1,2,2-Tetrachloroethane	108
Propylbenzene	115
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	120
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	81
Hexachlorobutadiene	81

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0901401A-04AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	1012604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 09:48 AM

Compound	%Recovery
Freon 12	106
Freon 114	92
Chloromethane	110
Vinyl Chloride	104
1,3-Butadiene	96
Bromomethane	96
Chloroethane	105
Freon 11	99
Ethanol	102
Freon 113	106
1,1-Dichloroethene	118
Acetone	113
2-Propanol	124
Carbon Disulfide	98
3-Chloropropene	116
Methylene Chloride	115
Methyl tert-butyl ether	135
trans-1,2-Dichloroethene	107
Hexane	121
1,1-Dichloroethane	124
2-Butanone (Methyl Ethyl Ketone)	122
cis-1,2-Dichloroethene	125
Tetrahydrofuran	131
Chloroform	119
1,1,1-Trichloroethane	114
Cyclohexane	108
Carbon Tetrachloride	114
2,2,4-Trimethylpentane	116
Benzene	111
1,2-Dichloroethane	126
Heptane	115
Trichloroethene	111
1,2-Dichloropropane	114
1,4-Dioxane	110
Bromodichloromethane	118
cis-1,3-Dichloropropene	114
4-Methyl-2-pentanone	121
Toluene	112
trans-1,3-Dichloropropene	123



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0901401A-04AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	t012604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/09 09:48 AM

Compound	%Recovery
1,1,2-Trichloroethane	111
Tetrachloroethene	106
2-Hexanone	124
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	110
Chlorobenzene	106
Ethyl Benzene	109
m,p-Xylene	107
o-Xylene	106
Styrene	108
Bromoform	110
Cumene	110
1,1,2,2-Tetrachloroethane	107
Propylbenzene	113
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	99
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	91
alpha-Chlorotoluene	114
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	77
Hexachlorobutadiene	76

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

2/4/2009

Mr. Dave Powers
MWH Americas, Inc.
175 West Jackson Blvd.
Suite 1900
Chicago IL 60604

Project Name: Blackwell
Project #: 4050581.098101

Dear Mr. Dave Powers

The following report includes the data for the above referenced project for sample(s) received on 1/22/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1945 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Brandon M. Dunmore'.

Brandon Dunmore
Project Manager

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0901401B

Work Order Summary

CLIENT:	Mr. Dave Powers MWH Americas, Inc. 175 West Jackson Blvd. Suite 1900 Chicago, IL 60604	BILL TO:	Accounts Payable MWH Americas, Inc. PO Box 6610 Broomfield, CO 80021
PHONE:	312-831-3000 x3432	P.O. #	
FAX:	312-831-3021	PROJECT #	4050581.098101 Blackwell
DATE RECEIVED:	01/22/2009	CONTACT:	Brandon Dunmore
DATE COMPLETED:	02/03/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	BW-LFGSTACK-49A	Modified ASTM D-1945	1.5 "Hg	5 psi
02A	Lab Blank	Modified ASTM D-1945	NA	NA
02B	Lab Blank	Modified ASTM D-1945	NA	NA
03A	LCS	Modified ASTM D-1945	NA	NA
03AA	LCSD	Modified ASTM D-1945	NA	NA
03B	LCS	Modified ASTM D-1945	NA	NA
03BB	LCSD	Modified ASTM D-1945	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 02/04/09

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1945
MWH Americas, Inc.
Workorder# 0901401B

The laboratory performed analysis via modified ASTM Method D-1945 for Methane and fixed gases in natural gas using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1945	ATL Modifications
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 85-115%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum 3-point linear calibration is performed. The acceptance criterion is %RSD <= 15%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+ Hydrocarbons).
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Six qualifiers may have been used on the data analysis sheets and indicate as follows:

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: BW-LFGSTACK-49A

Lab ID#: 0901401B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.14	1.6
Nitrogen	0.14	12
Methane	0.00014	56
Carbon Dioxide	0.014	30
Ethane	0.0014	0.0026
Ethene	0.0014	0.0014
Propane	0.0014	0.0017
Isobutane	0.0014	0.00038 J
Butane	0.0014	0.00012 J
Pentane	0.0014	0.00011 J
C6+	0.014	0.011 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BW-LFGSTACK-49A

Lab ID#: 0901401B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9012924	Date of Collection: 1/21/09
Dil. Factor:	1.41	Date of Analysis: 1/29/09 07:30 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.14	1.6
Nitrogen	0.14	12
Carbon Monoxide	0.014	Not Detected
Methane	0.00014	56
Carbon Dioxide	0.014	30
Ethane	0.0014	0.0026
Ethene	0.0014	0.0014
Acetylene	0.0014	Not Detected
Propane	0.0014	0.0017
Isobutane	0.0014	0.00038 J
Butane	0.0014	0.00012 J
Neopentane	0.0014	Not Detected
Isopentane	0.0014	Not Detected
Pentane	0.0014	0.00011 J
C6+	0.014	0.011 J
Hydrogen	0.014	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0901401B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9012904a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/29/09 09:30 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.013 J
Nitrogen	0.10	0.066 J
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected
Acetylene	0.0010	Not Detected
Propane	0.0010	Not Detected
Isobutane	0.0010	Not Detected
Butane	0.0010	Not Detected
Neopentane	0.0010	Not Detected
Isopentane	0.0010	Not Detected
Pentane	0.0010	Not Detected
C6+	0.010	Not Detected
Hydrogen	0.010	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0901401B-02B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9012903b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/29/09 09:08 AM

Compound	Rpt. Limit (%)	Amount (%)
Hydrogen	0.010	Not Detected

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0901401B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9012929	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/29/09 09:49 PM

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Monoxide	101
Methane	100
Carbon Dioxide	100
Ethane	99
Ethene	101
Acetylene	95
Propane	100
Isobutane	99
Butane	100
Neopentane	99
Isopentane	99
Pentane	100
C6+	105

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0901401B-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9012930	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/29/09 10:27 PM

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Monoxide	103
Methane	101
Carbon Dioxide	100
Ethane	100
Ethene	101
Acetylene	96
Propane	100
Isobutane	100
Butane	100
Neopentane	100
Isopentane	100
Pentane	100
C6+	106

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0901401B-03B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	9012931b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/29/09 10:52 PM

Compound	%Recovery
Hydrogen	103

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCSD

Lab ID#: 0901401B-03BB

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name: 9012932b
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 1/29/09 11:17 PM

Compound	%Recovery
Hydrogen	103

Container Type: NA - Not Applicable



Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 457-4322

**180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020**

Page 1 of 1

Project Manager DAVID POWERS

Collected by: (Print and Sign) J. Edgar / A. Birn 11-5-67

Company MWH Email JUSTIN.E.BIGGAR@MWH.COM

Address 74 W. Jackson Blvd. ^{St. MC} 1920 City CHICAGO State IL Zip 60604 ^{cd. m}

Phone (312) 831-3000 Fax (312) 831-3021

Project Info:

P.O. #

Project # 4050581. 098jci

Project Name BLACKWELL

Turn Around Time:

☒ Normal

☐ Rush

509217

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

$$N_2 \quad H_2$$
[illegible]

Relinquished by: (signature) Date/Time

Received by: (signature) Date: Time:

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Notes:

PLEASE CHECK FLOW CONTROLLER TO VERIFY

IF IT SUSTAINED DAMAGE DURING

SHIPPING, THUS AFFECTING SAMPLE RESULTS

**Lab
Use
Only**

Shipper Name

Alt. Bill #:

Temp. {°C}

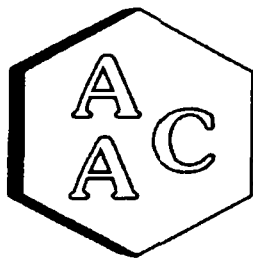
Condition

Custody Seals Intact?

Work Order #

Yes No None

0901401



Atmospheric Analysis & Consulting, Inc.

CLIENT : MWH Americas
AAC PROJECT NO. : 090039
REPORT DATE : 01/23/2009

On January 22, 2009 Atmospheric Analysis & Consulting, Inc. received one (1) Summa Canister for Total non-methane organic compounds analysis by EPA 25C. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

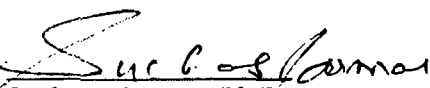
Client ID	Lab No.	Initial Pressure	Final Pressure
BW-LFGSTACK-49A	090039-36900	691.0	901.0

EPA 25C Analysis - Up to a 1 mL aliquot of samples is injected into the GC/FID/TCA for analysis in triplicate following EPA 25C as specified in the SOW.

No problems were encountered during receiving, preparation, and/ or analysis of this sample. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI- EPA 25C.

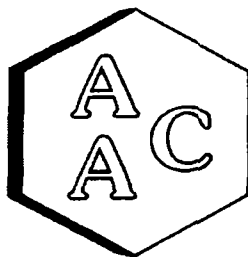
I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Release of the data contained in this hardcopy data package and its electronic data deliverable submitted on diskette has been authorized by the Laboratory Director or his designee, as verified by the following signature.

If you have any questions or require further explanation of data results, please contact the undersigned.


Sucha S. Parmar, Ph.D.
President

This report consists of 4 pages.





Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

Client : MWH Americas
Project No. : 090039
Matrix : Air
Units : ppmv

Sampling Date : 01/21/2009
Receiving Date : 01/22/2009
Analysis Date : 01/23/2009
Report Date : 01/23/2009

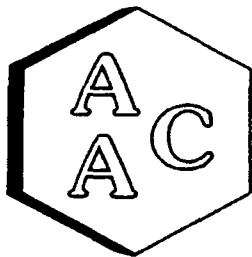
EPA Method 25C

Detection Limit:		1.0 ppmv
Client Sample ID	AAC ID	TNMOC*
BW-LFGSTACK-49A	090039-36900	793.9

***Total Non-Methane Organic Compounds as Methane**

Dr. Sucha Parmar
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Analysis Date: 1/23/2009

Analyst: DN

Units: ppmv

Instrument ID: FID#4

Calibration Date: 12/11/2008

I - Opening Calibration Verification Standard - Method 25C/D

Analyte	xCF	dCF	%RPD*
CO	6064	5507	9.6
CH4	5513	5884	6.5
CO2	5767	5723	0.8
Propane	16347	16420	0.4

II - Method Blank - Method 25C/D

AAC ID	Analyte	Sample Result
MB	NMEHC	ND

III - Laboratory Control Spike & Duplicate - Method 25C/D

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	NMEHC	50.0	50.7	51.6	101.5	103.3	1.8

IV - Closing Calibration Verification Standard - Method 25C/D

Analyte	xCF	dCF	%RPD*
CO	6064	5492	9.9
CH4	5513	5936	7.4
CO2	5767	5569	3.5
Propane	16347	16115	1.4

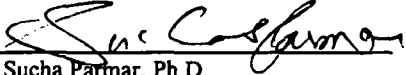
xCF - Average Calibration Factor from Initial Calibration Curve

dCF - Daily Calibration Factor

* Must be <15%

** Must be 90-110 %

*** Must be <20%


Sucha Parmar, Ph.D.
Technical Director



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